

River Corridor Closure Contract

Washington Closure Hanford Lessons Learned

February 2017

For Public Release

Washington Closure Hanford

Prepared for the U.S. Department of Energy, Richland Operations Office
Office of Assistant Manager for River Corridor



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Executive Summary

As established in DOE O 413.38, *Program and Project Management for the Acquisition of Capital Assets*, lessons learned represent “the knowledge . . . garnered through the process of actually completing the . . . project. Lessons learned are valuable because they will benefit future endeavors and ideally prevent any negative happenings from taking place in the future.”

Over the course of an 11-year contract, especially as successful as the River Corridor Closure (RCC) Project was, there are many lessons—far too many to be captured in a single document. To try to get the most notable lessons learned, this document relied not on the observations of one or two individuals, but, rather, solicited input from more than three dozen people who had helped shape and deliver the project. These people represented a range of functions including operations, safety, project controls, information technology, human resources, property management, operations support, quality assurance, finance, procurement, internal audit training, document control, and records management. They represent people still on the project as well as many who had left—either to retire or to continue their careers elsewhere.

Our goal was to assemble the lessons we learned, both from our successes and our mistakes, to add to the many resources that have been created by the U.S. Department of Energy (DOE) and its contractors. In each case we endeavored to choose and explain those lessons we felt had potential far beyond the River Corridor or remediation work. Yet, recognizing that every contract is different, we did not try to be dogmatic or too absolute in our explanations. Rather, the lessons learned are arranged into functionally-related categories, with each lesson including a brief statement of the lesson we learned, a broader discussion about the substance and context to allow a fuller appreciation of the lesson, and then summary statements about what we experienced as the associated benefits or consequences. Finally, a very brief notation about how to gauge the effectiveness of your actions should you put the lessons to work on your own contract.

In the end, we recognize that the success of Washington Closure Hanford, DOE, and the RCC Project was in large part due to all the experience, expertise, and lessons learned that our personnel brought with them to this project. In offering this lessons learned document, we hope to contribute some of our knowledge for use in future contracts.

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Introduction

Washington Closure Hanford (WCH) has learned many lessons during the course of the 11 years of the River Corridor Closure (RCC) Project. The project has been extremely successful—completing demolition of 324 nuclear facilities, remediation of 578 waste sites, and disposing of 12 million tons of *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA) waste. This represented and covered 220 mi² of the Hanford Site—an area along 46 miles of the Columbia River.

At the time of completing the contract period of performance (September 30, 2016), WCH was number one in the U.S. Department of Energy (DOE) Environmental Management Contractor Safety Rankings, having achieved 1 million hours 22 times; having won 15 URS/AECOM President's Safety Awards and 7 VPP Star of Excellence Awards; and ending the contract with >7.4 consecutive million safe hours.

Cost and schedule performance were also commendable. WCH completed all 51 milestones jointly agreed to by DOE, the Washington State Department of Ecology, and the U.S. Environmental Protection Agency—7 completed on time, and 44 completed ahead of time. Also indicative of the positive relationships maintained during the course of the contract, WCH and DOE successfully negotiated >200 cost proposals and requests for equitable adjustment. Working together with DOE to make the project successful, WCH completed the contract period of performance with a positive cost variance of approximately \$300 million while adding over \$1 billion dollars of new work scope. In addition, WCH exceeded some of the most challenging socioeconomic goals of any DOE contract—having subcontracted more than 70% of the work scope, with 88.7% of subcontracted dollars (>\$1.1 billion) awarded to small businesses.

These factors contributed to the positive recognition routinely received by the contract. In addition to the safety awards, WCH won the Project Management Institute's (PMI) regional Project of the Year award and was one of three finalists for PMI's Global Project of the Year. Within the corporation, WCH also was recognized as AECOM's project of the year, winning internationally in the "delivery" category. WCH also distinguished itself by establishing a highly touted "People Plan," which prepared and equipped personnel for their release from the project, resulting in successful job placement of 97% (432 of 447) of those nonrepresented personnel who wanted another job after leaving the RCC Project.

WCH took an innovative approach to closing out the contract. Starting approximately 2 years before the anticipated end of the contact period of performance, WCH teamed with the DOE Richland Operations Office (DOE-RL) project team and began several initiatives aimed at appreciably reducing the time and cost of completing the closeout of a major DOE prime contract. In addition to establishing a group to begin charting the course to closure, WCH gained regulator approval of a plan that would allow the closure and transfer of segments of remediated land to final stakeholder management. By segregating the transferred areas into smaller parcels, closeout work was essentially being done in parallel with finishing up the contract scope of work. The effect was that in advance of the end of the period of performance, the vast majority of work scope had already been documented, verified, and accepted by DOE and the regulators as being complete.

This approach to pursuing closeout activities in parallel with the completion of the contract scope was also translated into the approach used for all WCH business functions. Beginning with senior management reviews, each function began to identify opportunities to complete work and deliverables in advance of the completion of the contract field work. This effort, over time, matured into a DOE/WCH coordinated initiative in which WCH and their DOE functional counterparts identified and committed to implementing opportunities to streamline the closure process. The functional counterparts, facilitated by

the DOE contracting officer and DOE Assistant Manager of Administration, also developed a matrix to capture and track these opportunities; this matrix also identified the documentation and deliverables required to establish that each function and each contractual obligation had been fulfilled and could be considered closed.

This plan, known locally as the “Closeout Office Avoidance Plan,” became one of the factors differentiating this contract from any previous contract. Whereas there is a long history of prime contracts taking 3, 5, and 7 years to reach closure, in an unprecedented agreement, WCH and DOE senior management committed jointly to close out the RCC Project contract within 6 months of finishing the field work. With this impetus, wholesale rethinking and collaborative innovation redefined the path for many of those activities generally recognized as contributing to a protracted closeout process. For example, an agreement between DOE and WCH was reached that provided for payment by DOE to WCH of all target fee holdback and the majority of the earned cost share at the completion of field work rather than at completion of contract closeout; the schedule for annual incurred cost audits was accelerated; questioned costs cited in several years of incurred cost audits were negotiated and closed out as a single package; a process was agreed to that allowed for a single, all-inclusive settlement of all questioned costs identified in WCH-conducted subcontractor allowable cost audits as well as those questioned costs from DOE-conducted audits; approaches were implemented that resulted in expedient disposition of records and property; and a simple “advanced agreement on cost” was established as the vehicle for administering the closeout office.

Given the breadth of lessons learned and the number of unique challenges and innovations associated with the RCC Project, WCH agreed that it would capture the highlights in a lessons learned document. Over the course of the project, more than 100 formal lessons learned reports have been entered by WCH in *OPEXShare*, an online network of lessons learned and best practices administered by DOE for use by other DOE contractors, as well as by state and local government and their contractors. To increase dissemination of these lessons, in April 2015, WCH also issued a report, *Washington Closure Hanford Lessons Learned Summary Document (WCH-594)*, summarizing lessons addressing a broad spectrum of topical area including subcontracting, technical issues, equipment, and management.

This lessons learned report expands on and complements WCH-594. As established in DOE O 413.38, *Program and Project Management for the Acquisition of Capital Assets*, lessons learned represent “the knowledge . . . garnered through the process of actually completing the . . . project. Lessons learned are valuable because they will benefit future endeavors and ideally prevent any negative happenings from taking place in the future.”

WCH-594 largely focused on lessons learned with a localized perspective reflecting the nature of our remediation activities, e.g. “ensure ERDF (Environmental Remediation Disposal Facility) has sufficient capacity,” “use superdumps (oversize dump trucks) instead of waste containers where possible.” In contrast, this lessons learned document concentrates on lessons that can potentially be applied more broadly by DOE, our parent companies, and/or industry as a tool to enhance current and future contracts.

The lessons learned are arranged into functionally-related categories, with each lesson explained in a manner intended to allow the reader to understand the lesson, its benefits or consequence, the means by which it was or could be implemented, and a summary-level statement about gaging whether the implementation is producing the desired effect.

In the end, we recognize that the success of WCH and the RCC Project was in large part due to all the experience, expertise, and lessons learned that our personnel brought with them to this project. In offering this lessons learned document, we are hopeful that some of that knowledge can be made available to the larger community of government agencies and government contractors.

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Lessons Learned

Lesson: 1.1

Title: Understand the Contract

LESSONS LEARNED SUMMARY:

The salient elements of a closure contract (Federal Acquisition Requirement [FAR] based) are much different than the standard management and operation (M&O) prime contracts that the U.S. Department of Energy (DOE) has predominantly been using for the past 50 years. Everyone involved in administering the contract (on both the customer and client sides) must fully understand the contract requirements and expectations.

DISCUSSION

Description:

The WCH contract was a cost reimbursable/schedule and cost performance incentive contract. It was operated by a single-purpose limited liability company (LLC). Rather than annual funding and the customer bearing much of the risk, in this contract funding was established for the complete duration of the contract period of performance (10 years). In so doing, essentially all risk (including potential loss of incentives) was transferred to the company along with full latitude to coordinate and sequence all work (rather than requiring annual work plans) in any means the contractor determined to be most inclined to provide for safe and efficient performance of work.

The challenge that resulted was that everyone who could affect the administering of the contract did not always separate the concept of a cost-plus incentive fee contract from the traditional M&O contract: changes in scope and funding occurred routinely, and requests to change the sequencing or prioritization of work also introduced actions contrary to the intended design of the contract. In some instances, these changes not only disrupted work flow but also had adverse impacts on the amount of the cost incentives.

Although training had been provided for WCH and DOE in such areas as understanding the changes clause, the need for a more disciplined approach to administering the contract could have allowed for a more timely and more cost-efficient completion of the work scope.

Consequences / Benefits:

Just as all subcontracts need to be administered in a manner that ensures compliance with the requirements, complex prime contracts also need extreme discipline by all who can effect the work, the funding, and the sequencing to ensure contract requirements are met and undue cost or schedule impacts do not result.

Implementation & Effectiveness:

Team building at the beginning of the contract that brings together the senior management of both the contractor and the client is needed, with a focus on any attributes of the contract that may be unique or require alignment in the expectations. Routinely, this understanding of the contract expectations needs to be reinforced, with open partnering sessions that ensure the discipline is maintained throughout the duration of the contract.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) FAR based contracts

Lessons Learned

Lesson: 1.2

Title: Document Contract and Regulatory Requirements

LESSONS LEARNED SUMMARY:

Develop a contract scope and regulatory requirements matrix to describe and clarify work scope, and align the work with required completion documents.

DISCUSSION

Description:

The River Corridor Closure Contract included a contract work scope table that was converted into a contract closeout tracking matrix. The matrix tracked the completion dates, the completion documentation identification number, and whether the scope was included in a schedule performance incentive fee payment. The matrix provided a mechanism to track and document the details to support schedule incentive and contract completion. The matrix needed to be developed early, maintained, and controlled by the project controls organization.

Given the complex regulatory environment, a complete analysis required both a detailed Work Breakdown Dictionary and a comprehensive analysis of regulatory requirements. The contract, in comparison, contained only general language about adhering to U.S. Department of Energy (DOE) Orders and applicable laws and regulations.

Capturing and aligning DOE, legal, and regulatory requirements to work scope involved extensive analysis by teams of subject matter experts in a variety of disciplines. As an initial step, WCH established who was responsible for fulfilling each of the obligations cited in the contract, followed by issuance of a procedure establishing the methodology for reviewing and assigning responsibility for implementing contract requirements. Pursuant to issuance of the procedure, a variety of requirement-by-requirement reviews were conducted resulting in a DOE Order Applicability Matrix, a Conduct of Operations Implementation Matrix, and a Training Implementation Matrix. However, those documents still left a need to align an array of primary safety and environmental source documents with the particular scope elements.

A team was formed to focus on environmental, safety, and health (ES&H) requirements. An iterative process was completed involving reviews of contractual documents, interviews with subject matter experts, interactions with personnel in the various fields, and comparisons between the WCH-developed source lists and those developed at other DOE sites. The resulting WCH Environment, Safety, Health and Quality Assurance (ESH&QA) Source Document and Applicability Matrix examined (a) requirements source documents cited in the project's Integrated Safety Management System Description; (b) environmental requirements documents; and (c) other ESH&QA requirements documents. Further amplifying these efforts, WCH subsequently developed a separate 10 CFR 851 (Worker Health and Safety) Compliance Matrix.

In the ESH&H and 10 CFR 851 matrices, each source document was parsed into its individual requirements. Columns in the matrix then indicated whether the requirement applied to WCH-performed and/or subcontracted work; to which projects the requirement applied (i.e., some requirements are applicable to building demolitions, but not to open-air waste site remediation activities); how the requirement was to be implemented (e.g., reference to a procedure); and who within WCH owned responsibility for the requirement's implementation.

Consequences / Benefits:

Provides the road map to track scope completion and identifies the documents to verify completion. Defines the contract closure requirements and the mechanism to document completion.

Lessons Learned

<p>Implementation & Effectiveness: A disciplined analysis is required that involves all the relevant organizations. The capture of the requirements and their application needs to be vetted with the client to ensure common understanding and to ensure the matrices are complete. Use of requirements documents from other DOE sites is helpful, but must be complemented by the requirements specific to each project. Independent audits will provide a foundation for determining the completeness and effectiveness of the efforts.</p>
<p>APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____</p>

Lessons Learned

Lesson: 1.3
Title: Align Project and Function Due Diligence Activities
<p>LESSONS LEARNED SUMMARY: When assuming a contract, a standard step is performing the due diligence. Significant effort is expended looking at operating systems, facilities, equipment, and controls. The same level of diligence needs to be applied when assessing the support capabilities and systems.</p>
<p>DISCUSSION Description: Business functions and support operations need to be carefully assessed during contract transition. When personnel go out to the field, they need to be considering factors such as property controls, functionality of computer applications, procurement documentation, and training. Any weaknesses in these vital support systems if understated during the period of due diligence can shift undocumented and unfunded risks to the contractor.</p> <p>In the case of WCH, several areas were not sufficiently assessed or characterized to allow a full appreciation of the risks and vulnerabilities. As examples, the business systems were all assumed to be acceptable; to the contrary, within the first few years, a comprehensive enterprise system integrating human resources, procurement, and finance had to be implemented, costing approximately \$1.7 million and a significant amount of resources. Property records were not as well kept as assumed, resulting in significant declarations of lost property pending the implementation of exhaustive, hands-on inventories. The software quality assurance documentation for several safety systems was less than adequate, requiring a major overhaul and several findings by both the local and Headquarter offices of DOE.</p> <p>Although some of these types of issues might be presumed to be identified by personnel looking at the business functions, some required assessments from field personnel--either to flag a problem that needed to be further evaluated or in defining the magnitude and breadth of a potential weakness.</p>
<p>Consequences / Benefits: The consequences of an incomplete due diligence is the tacit acceptance of risk and vulnerability by the new contractor. Once the due diligence process is assumed by the client to be completed, there are no do-overs.</p>
<p>Implementation & Effectiveness: In the process of developing the checklists or smart books to be used in the process of conducting the due diligence process, field and functional personnel must work together to ensure that all such assessments are thorough and coordinated. Feedback from the field relative to potential functional area weaknesses, as well as indications from the functional personnel to the field personnel regarding what to look for and report, are the keys to a successful assessment of the conditions being inherited.</p>
<p>APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input checked="" type="checkbox"/> Other (Explain) <u>All major prime contractors</u></p>

Lessons Learned

Lesson: 1.4

Title: Understand the Changes Clauses in the Contract

LESSONS LEARNED SUMMARY:

The WCH contract had numerous clauses that could be applied to a wide array of changes. Working with DOE at the onset of the project to ensure a clear and common understanding of the clauses and their application was a cornerstone of building a relationship that allowed for an efficient process for administering the hundreds of requests for equitable adjustment (REAs) and contract modifications that occurred over the course of the contract.

DISCUSSION

Description:

During contract transition and startup, teams of Contracts and Project Integration personnel identified key differences between the means by which scope would be added or deleted in the River Corridor Closure (RCC) Contract versus the methods commonly employed in management and operation (M&O) contracts. These provisions govern a wide array of changes:

- Added or deleted scope (i.e., waste sites, facilities to be demolished)
- Material Differences True Up (one-time opportunity to make corrections to the statement of work)
- Government sequestration or shutdown (impacts to funding and/or schedules)
- Impacts to performance as a result of new requirements (e.g., addition of more stringent requirements for beryllium characterization and disposal)
- Added DOE orders
- New clauses added to contract

The unique challenges arose from the fact that the RCC Contract contained a specific section that detailed the scope of work for the entire 10-year duration of the contract. Being that the RCC Contract was a cost plus incentive contract (and therefore structured around contractually-established target cost and target fee), any scope changes identified during the course of the contract had to go through a formal contractual process and could only be authorized by the DOE contracting officer.

Given these conditions, and given the magnitude of the cleanup area (220 square miles), it was understood that it was highly probable that scope would be discovered that was not identified in the initial contract. Accordingly, significant time and resources were expended in ensuring both a well-understood and efficient change process.

The WCH team conducted detailed reviews of all contract provisions central to administering the change process. Among the relevant contractual provisions were the following clauses: Differing Site Conditions, Authorization to Perform Scope, Change Order Accounting, Requirements for Cost and Price Data, and Changes to Target Cost and Fee.

However, the key provision is the clause, "Changes-Cost Reimbursement (Aug 1987) Alternate 1 (Apr 1984)": "The contracting officer may at any time, by written order, and without notices to the sureties, if any, make changes within the general scope of this contract....If any change causes an increase or decrease in the estimated cost of, or the time required for, performance of any part of the work under this contract, whether or not changed by the order, or otherwise affects any other terms and conditions, the Contracting Officer shall make an equitable adjustment...."

WCH's key objective therefore became making certain that this process was administered in an equitable manner. The first step was seeking clarification and interpretation of the applicable contract provisions. A series of letters were exchanged between the WCH and DOE Contracting Officers, along with meetings focusing on such matters as the contractual language regarding differing site conditions, determining how changes were to be made to target cost and fee, and establishing the correspondence between the

Lessons Learned

budgeted cost of work performed and REAs. The result was better understanding by both parties.

Based on these exchanges and the recognition that the “changes” clause was not necessary or very seldom utilized in M&O contracts, the next step was ensuring a broader understanding of its meaning and use among the principals in both WCH and DOE. To this end, WCH developed a “changes” presentation/training tool. Following endorsement by DOE, WCH and DOE-RL conducted several group training sessions to discuss their respective processes for administering changes. The enhanced understanding enabled WCH and DOE to develop complementary procedures and processes.

As the contract progressed, DOE began requesting cost proposals in accordance with the “Changes” provision. However, the initial REAs submitted (which could run to lengths upwards of 100 pages in providing the required cost estimates, schedule, and any pertinent backup documentation) resulted in numerous questions and a protracted, laborious approval cycle.

Working collaboratively, the issues (principally on the presentation of certified cost and pricing data) led to steady improvement in the REA development and review process. Although the need to negotiate the elements contained within the REA remained, the process allowed DOE to perform timely technical and cost reviews and to develop negotiation positions. This improved change process also helped with expediting approval of those REAs (REAs in excess of \$25 million) that required DOE Headquarters’ approval.

Consequences / Benefits:

The working understanding of the changes clauses between both the DOE and WCH personnel allowed for an effective relationship, one aspect was the successful negotiation of some 200+ REAs and more than 700 contract modifications.

Implementation & Effectiveness:

Understanding the changes clauses is critical in administering the contract. A full understanding of the options and authorities of the contracting officer must be had by both the client's and the project's management teams in order to support sound decision making and to avoid potential unallowable or questioned costs.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 1.5
Title: Coalesce the Business Team
LESSONS LEARNED SUMMARY: In many prime contracts, the operating organization is a Limited Liability Company (LLC), with multiple partners and/or pre-selected subcontractors. In some instances, the key and essential personnel assembled for the project may have had limited previous (if any) working interactions. It is a vital component of the project's success that the new corporate entity and the associated management team are seen as and can operate as a team.
DISCUSSION Description: WCH, like many DOE prime contractors, brought together talent from three major corporations: AECOM (formerly URS and originally Washington Group International Inc.), a top environmental project management firm recognized for its leadership in integrated safety management; Bechtel, a top environmental construction firm recognized for its project management leadership; and CH (formerly CH2M HILL), a top environmental design firm with strengths in regulatory strategies and risk management. The LLC was managed daily by a president and project manager appointed by AECOM; a deputy project manager appointed by CH; and a planning and integration manager appointed by Bechtel. However, all activities were run as an integrated team; there were no scope set-asides for specific parent organizations. Reinforcing this integration was the agreement that all employees (with the exception of personnel on short-term assignments)—whether inherited from the previous contractor (Bechtel Hanford, Inc.) or transferred in from the parent companies—became WCH employees. This commitment to an integrated operation was also reflected in that corporate talent was brought in based on a “best player” basis—who could best help accomplish the assignment, not based on who owned a particular component of the contract scope. Although some tensions existed early in the contract among the three parent organizations, these issues were dealt with directly and resolved. In addition, efforts were made to engage inherited managers into the decision-making processes—on funding, scheduling, and safety decisions. Overall, the affiliation of each member of the WCH team was in no way evident.
Consequences / Benefits: Because of the strategy at work, one of the positive features that WCH was regularly cited for is the fact that personnel who joined the project or did assessments of the project could not discern who of the management came from which of the three parent companies. All of that was transparent. Working together also extended the benefits to personnel as the project neared completion: Agreements among the parent companies were that they retain first rights regarding the opportunity to place their affiliates who had been brought in from the parent company, but, if there was no suitable assignment for that individual, the other parent companies looked to see if they had potential assignments for the individual. This shared commitment to help with placement of personnel was a major contributor to the success of the placement program and also strengthened the retention goals.
Implementation & Effectiveness: Team building is a function of repeated exercises to concentrate efforts on how to make the project successful, with the understanding that the project's success, in turn, is what produces success for the parent companies. This strategy needs to be endemic in the workings of the senior staff, the Board of Managers, and in all the personnel introduced through corporate transfers or work orders with the parent companies.

Lessons Learned

APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 1.6
Title: Publish Listings of Subject Matter Experts and Program Owners
<p>LESSONS LEARNED SUMMARY: Given the complexity of the project, it was necessary to provide a published listing of who were the program owners and subject matter experts (SMEs). The timeliness of decision making, ensuring appropriate personnel were engaged in those decisions, and the responsibility for representing the contract to the client and regulators relied on crisp identification of who owned the authority and accountability for delivering specific elements of the scope of work.</p>
<p>DISCUSSION Description: Early in the project, WCH established and maintained a program owner and SME listing.</p> <p>A program owner was established when more than one of the following conditions applied:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Distributed responsibility/resource base existed for the program within WCH <input type="checkbox"/> Contractual obligations for program ownership existed <input type="checkbox"/> Sustained response needed to a major performance issue/commitment <input type="checkbox"/> Ongoing training and oversight guidance (or assessment tools) needed to be provided <input type="checkbox"/> Single WCH point of contact for regulators/oversight boards was required <input type="checkbox"/> Authority for resolution of issues/differences in methodologies must have been available <input type="checkbox"/> Authority to assign priorities (+ potentially resources) needed to be available <input type="checkbox"/> Consistent practices or validated equivalencies across the River Corridor Closure Contract were essential for integrity and consistency of operations and/or safety and quality standards <input type="checkbox"/> Providing technical leadership <input type="checkbox"/> Representing WCH to oversight agencies/external reviewers <input type="checkbox"/> Establishing WCH standards and expectations <input type="checkbox"/> Defining and implementing appropriate levels of oversight and assessment <input type="checkbox"/> Resolving issues pertaining to practices, priorities, and resources (and ensuring the resolution did not adversely affect WCH schedules, costs, or commitments) <input type="checkbox"/> Providing and maintaining procedures or implementing instructions <p>SMEs were established when</p> <ul style="list-style-type: none"> <input type="checkbox"/> A technical resource or resources for WCH needed to be identified (activity pertained to more than one function/project) <input type="checkbox"/> DOE orders/contractual obligations were required to be translated into programs/procedures <input type="checkbox"/> Training requirements had to be established (and/or training provided) <p>Establishing program owners and SMEs provides personnel a knowledgeable point of contact and provides consistent implementation of policies and procedures. This step is needed because organization charts are not sufficiently detailed to ensure the appropriate contacts are identified. For example, the organization charts do not make evident the full range of program and SME responsibilities such as the individual responsible for animal control, drug testing, or removal of ozone-depleting substances.</p> <p>Aligning the SMEs and program owners with the efforts to develop requirements documents provides a sound basis for conducting work and making certain appropriate personnel are involved in technical and programmatic decisions.</p>
<p>Consequences / Benefits: The listings provided uniform interpretation and application of policies and procedures. They provided clear definitions of authorities and accountabilities, and were used broadly both by WCH personnel and by the client. These lists were most beneficial during the early stages of the project when many people and their</p>

Lessons Learned

detailed assignments were not broadly known by the personnel who had joined the project.

Implementation & Effectiveness:

Development of the list must begin at transition and be maintained throughout the project. Annual reviews of the listings should be performed to ensure the listing remains current. Clear definitions of program owner and SME responsibilities will help identify the level of specificity to be maintained in then listing.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 1.7
Title: Establish and Maintain a Shared Vision with the Customer
<p>LESSONS LEARNED SUMMARY: Achieving success on a contract requires that the customer and contractor have a shared agreement on what constitutes success. Holding routine partnering sessions and providing a commonly applied set of objectives contributes to this shared vision.</p>
<p>DISCUSSION Description: During the course of the WCH contract, routine efforts were made to ensure that the customer and contractor had well-aligned objectives. As example, DOE came up with the concept of the "2015 Vision"; this unifying theme effectively encapsulated the expectations of completing the remediation work and solidified jointly developed schedules for completion of each parcel of land to be remediated. This vision became the cornerstone for communications within and outside the contract--and was used in all presentations by both WCH and DOE.</p> <p>A similar strategy was developed in cooperation between WCH and DOE when efforts began to transition to a focus on closeout. Together, both DOE and WCH, in a partnering session among the senior management teams, came up with the concept of a "Closeout Office Avoidance Plan," a commitment to complete contract closeout within 6 months of completing all field work. This "Plan" was then communicated in a joint WCH / DOE meeting that involved essentially the complete management teams of both organizations.</p> <p>The result was more than just a communication strategy: senior managers from both WCH and DOE made a clear and definite statement of the expectations and laid out precisely what the vision was. From there, it was simply a means of laying out the detailed schedules needed to achieve the vision; there were no longer any questions regarding what the vision was or what specifically was to be accomplished.</p>
<p>Consequences / Benefits: Everyone pulling in the same direction is essential for the success of any project. In the course of the WCH project, several opportunities were taken to ensure complete alignment among all contributors. This alignment is clearly a key factor in the overall success of the River Corridor Closure Project.</p>
<p>Implementation & Effectiveness: Setting a vision requires that client and contractor come together to define in very precise terms what they want accomplished. The vision has to be more than a platitude; it needs to spell out a set of tangible, achievable objectives. It also must have continued support from senior management who need to demonstrate on an ongoing basis both a commitment to the vision is to be the focusing agent for all strategic and tactical efforts.</p>
<p>APPLICABILITY: <input checked="" type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input checked="" type="checkbox"/> Other (Explain) <u>All major prime contractors</u></p>

Lessons Learned

Lesson: 1.8
Title: Maintain Comprehensive Contract Files
<p>LESSONS LEARNED SUMMARY: Prime contracts of any significant duration involve significant numbers of important contract decisions--interpreting contract clauses, changes (in scope, funding, schedule), performance against objectives, milestones, and regulatory commitments. In many instances, these decisions involve numerous communications (written and verbal) and may be revisited (e.g., re-openers on requests for equitable adjustment [REAs]) many months or even years after the initial decision is made. In all cases, thorough documentation is the differentiator between a timely resolution and a protracted negotiation.</p>
<p>DISCUSSION Description: Over the course of the WCH contract, innumerable contractually related decisions were required--more than 250 REAs were negotiated, 51 Tri-Party Agreement milestones were completed, significant regulatory and interactions with Tribal leadership were required, and hundreds of day-to-day clarifications and commitments were discussed between the contracting officers and other members of the management teams. In addition, many standing meetings, such as the weekly contract meetings among key personnel accountable for the performance of the contract, occurred that warranted formal documentation.</p> <p>Extensive documentation and files (including emails, letters, documents, and meeting notes) were maintained throughout the tenure of the contract by the WCH contracting officer. These files included all materials relevant to contract decisions.</p> <p>As an example, as the project began winding down, the email files and share drives for individuals who had left the project were maintained and remained accessible by the individual's manager. These files, as in the case of procurement, proved significantly valuable in the process of preparing files for archiving. Often gaps in the files were filled through researching the retained files. Even after that, the files were not permanently deleted until Records Management had confirmed there were no further records material requiring archiving.</p>
<p>Consequences / Benefits: Many of the determinations that ultimately affect the ability to come to a clear negotiated closeout of the contract come many years in advance of the closeout itself. Without the level of detail maintained, issues related to REAs, incurred cost audits, and agreements reached (particularly among the personnel who served as contracting officers during the intervening years of the contract) would have been subject to protracted debates. In many instances, it was an email or another document that had been retained in an individual's files that recorded the exchange between DOE and WCH contracting officers or that provided notes from a meeting that allowed an issue (such as a cost questioned in an incurred cost audit) to be closed.</p>
<p>Implementation & Effectiveness: From the very beginning of the contract, clear understanding must be established that all contract actions are exclusively the responsibility of the contracting officer and that all documents and/or communications related to any contractual matter be provided to the contracting officer. Personnel also must be apprised and routinely trained on the processes of recognizing and archiving records materials. The company's contracting officer, in turn, must develop a comprehensive filing system that maintains complete packages for all contractually related actions and decisions.</p>
<p>APPLICABILITY: <input checked="" type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input checked="" type="checkbox"/> Other (Explain) All major prime contractors</p>

Lessons Learned

Lesson: 1.9
Title: Effectively Use Government Furnished Services
<p>LESSONS LEARNED SUMMARY: Flexible site services (medical, training, utilities) are required to accommodate changing conditions, scheduling issues, and personnel/equipment availability. Having a contract that allowed WCH to make project-based decisions on how and when to use certain site services contributed to significant cost savings and full control of schedule and priorities.</p>
<p>DISCUSSION</p> <p>Description: Mandatory site services are identified by contract requirements and site-wide programs. Typically, the provider and user have different style contracts with DOE, which results in conflicts with scheduling priorities. The River Corridor Closure (RCC) Contract was a cost-plus-incentive fee (CPIF) contract structured to provide a strong financial motivation for the contractor to achieve a safe and efficient closure of the RCC Contract. The contracts of the providers for the mandatory and site-wide program-driven services were not similarly structured, which caused difficulty when WCH needed to utilize the service to accommodate changing conditions, scheduling issues, and personnel/equipment availability.</p> <p>These providers were not incentivized/motivated to provide the service outside of their normal operating procedures. Also, differences in priorities often contributed to delays and potential schedule impacts. A benefit to the project was that WCH's contract only stipulated a few services (e.g., emergency response, medical) that had to be procured from other site prime contractors; all other services could be procured in whatever fashion (self-perform, subcontract) that best suited the project.</p> <p>This flexibility, over time, was a significant cost savings; as an example, self-performing all IT services was significantly less costly and allowed WCH to develop customized solutions (such as broadband capabilities and the elimination of land lines for temporary facilities) that were responsive to the continual mobilizations and demobilizations around the site.</p>
<p>Consequences / Benefits: Making decisions that directly support project activities and schedules contributed to eliminating schedule delays and reducing costs. However, there is a need to ensure a balance between using and not using site services. For instance, although some savings might have been realized from pursuing an option other than using the Hanford Site Hazardous Materials Management and Emergency Response training center (HAMMER), countermanding administrative costs could have been incurred (including need for more subcontracts and subcontract oversight). Working with the providers did, as in the instance of training, provide opportunity to tailor service--as was the case of establishing block training (offering various required training courses back-to-back) as opposed to a more elongated schedule for completing required courses when large numbers of new employees joined the project (as occurred when represented personnel were displaced from one Hanford prime contract to another).</p>
<p>Implementation & Effectiveness: Contracts of service providers need to have flexibility built into them to allow other site contractors the ability to coordinate the support outside of their normal operating procedures. Each site service, unless contractually mandated, should be evaluated to ascertain if the provider has the precise service needed and can deliver that service at a reasonable cost and when required.</p>
<p>APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input checked="" type="checkbox"/> Other (Explain) <u>FAR-based contractors</u></p>

Lessons Learned

Lesson: 1.10

Title: Assign the Project Manager Based on How Well His/Her Skills Align with the Project's Needs

LESSONS LEARNED SUMMARY:

Depending on the type of contract, duration, and contract issues encountered, various leadership qualities may be needed to provide the best performance of the contract. Over the course of the contract's 11-year tenure, WCH had five project managers, each of whom was purposely selected based on the needs and circumstances of the project.

DISCUSSION

Description:

As with the life cycle of any process, a multi-year contract may require different personalities in order to bring out the best in the people and contract performance. As would be expected, the original project manager had a long suit in the construction industry, a background well aligned the initial focus on the complex facility decontamination and decommissioning activities. When the project ran into problems, a second project manager was brought in. His expertise was well suited to working through both the technical problems and the strain on WCH's relationships with DOE and the regulators. Once the issues had largely been resolved, the third project manager was brought in. In this instance, there was strong focus on shoring up the remaining conduct of operations weaknesses and on positioning the project for completing the remaining work scope.

This then led to the fourth and fifth project managers. As the contract began a shift toward closeout, a project manager was appointed who had recognized strengths in personnel management. While maintaining the positive relationships with DOE and regulators, her focus was to begin strengthening the programs that would provide for the anticipated reductions in staffing in a way that simultaneously provided for robust placement initiatives and for maximum retention of skills pending completion of their assignments. This personnel-driven closeout orientation proceeded until it became evident that closeout was not going to occur on the expected schedule.

When the decisions regarding extension of the contract became increasingly elongated, a final project manager was brought in as a closer. The final project manager, with recognized skills in project delivery and negotiation, was brought in to work on several critical contractual matters, including 1) negotiation of all outstanding requests for equitable adjustments, which comprised several very contentious deductive changes; 2) settlement of all questioned costs resulting from subcontractor allowable cost and incurred cost audits; and 3) negotiation of the final cost share incentive.

Consequences / Benefits:

In all instances, the assignment of a project manager who had the appropriate qualities and strengths for the particular phase of the project was a key factor in the project's success. Their collective leadership not only drove the exceptional safety, cost, and schedule performance, but also were key in establishing a lasting legacy for the project in such areas as management of personnel and contract closeout--areas in which WCH had been widely recognized by the corporations and by DOE as an exemplar. These are also reasons why WCH has won an array of safety, industry, and corporate awards, including the Voluntary Protection Program, Project Management Institute awards, and Awards of Excellence from AECOM.

Implementation & Effectiveness:

Implementation is exclusively a function of the Board of Managers maintaining the type of clear and committed oversight of the project in order to recognize both the project's technical needs and the distinctive leadership qualities that needed to be exhibited at each major phase of the project. Aligning the project leader with the challenges and expectations for the project creates the foundation from which all programs draw direction, commitment, and energy.

Lessons Learned

APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 1.11
Title: Establish an Incentive Fee Pool
<p>LESSONS LEARNED SUMMARY: Everyone on a project needs to have the sense of being an owner of the project's success. One means of accomplishing this goal is the use of incentives for all personnel to ensure personal alignment with project objectives. These incentives need to be tied to substantive and tangible accomplishments in safety, cost, and schedule performance.</p>
<p>DISCUSSION Description: The WCH contract established cost and safety incentives. The likelihood of earning these incentives was greatly enhanced by WCH's decisions to introduce both annual incentives for all employees based on the cumulative cost and schedule performance and a longer term incentive tied to completion of the majority of the contract scope (approximately \$1 billion worth of work).</p> <p>Both DOE and WCH benefited from the employee incentive program, which was to encourage and motivate employees to maximize the safe achievement of contract deliverables under budget and ahead of schedule. This program retained the needed employee skills through the project life cycle and promoted recognition of the team and individual performance. Getting buy-in from the client with the onset of the contract was important since it established a teaming partnership that moved the project in the right direction. Confirming goals, eligibility, program overview, and communication to all employees was done early in the contract to promote a teaming atmosphere within the River Corridor Closure (RCC) Project.</p>
<p>Consequences / Benefits: As a consequence of the employee incentive program, in later years, the non-manual allowable portions were directed to be unallowable; thus, WCH had to seek permission from the Board if payment was to be made from nonreimbursable funds. Hanford Atomic Metal Trades Council (HAMTC)- represented employees bargained this into their collective bargaining agreement, so their payments continued throughout the contract as allowable costs.</p> <p>The benefit was that all employees felt a part of the success of the RCC Project.</p> <p>In retrospect, given the positive effect the incentives had on performance, it would have been prudent to have established allowable employee incentives in an advanced agreement between WCH and DOE.</p>
<p>Implementation & Effectiveness: Implementation requires a solid obligation from DOE that a specific performance (e.g., safety, teaming with contractors, saving money, delivering ahead of schedule) will translate into a specific incentive value. That value, in turn, needs to have defined amounts to be awarded to project personnel--either on an equal share for all individuals or, as in the WCH model, with amounts differentiated by personnel categories (i.e., represented personnel, nonexempt personnel, junior professionals, senior professionals, management).</p> <p>Effectiveness will be demonstrated in the performance statistics and the level of interest shown by all personnel in those statistics. (As an example, a topic of every meeting at the Labor Temple was the cost and schedule performance and what might be done to improve it.)</p> <p>See also Lessons Learned 3.1.4, Make Effective Use of Incentive Programs.</p>
<p>APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input checked="" type="checkbox"/> Other (Explain) <u>FAR-based contracts</u></p>

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2.1 Training

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Lessons Learned

Lesson: 2.1.1

Title: Individualize Training Assignments

LESSONS LEARNED SUMMARY:

Training was a key component to all positions assigned to the River Corridor Closure (RCC) Contract. It was essential that all positions had an initial evaluation of what the training requirements were based on work being performed and the hazards of the job. In addition, this was continuously evaluated either at pre-determined intervals and/or when an individual changed positions.

DISCUSSION

Description:

Each position assigned to the RCC Contract was assigned tasks that represented the job duties and hazards associated with the specific work activity and location.

WCH took a unique approach to the assignment of training requirements, which helped maximize a trained workforce in the field as well as managed the cost and schedule of training on the project. WCH employees were assigned training based on their specific location, the specific tasks that they were going to be performing, and the site-wide programs that were associated with those tasks. Using this concept, training was assigned based on the individual's actual job responsibilities, not on position titles.

Early in the RCC Contract an analysis was performed to ensure that this approach allowed the project teams to customize their training needs, to ensure that they managed cost and schedule. During that analysis process it was determined that building the individual training requirements provided a better training foundation, which contributed to individuals' willingness to stay in assignments longer rather than opting in to other positions. This approach also allowed training resources to be focused on strengthening each worker's capabilities to perform the elements of his assignment as opposed to expending significant resources on training that could not be applied in the assigned job function.

When training was performed on an as-needed basis, the workforce had a greater awareness of what was essential to create a safely and sufficiently trained work force, one capable of safely performing all of the tasks associated with their work scope.

The key to this approach was to ensure that each individual's training was continually reevaluated as individuals moved from one area to another and one assignment to another. The approach represented significant cost and time savings.

However, there were issues with maintaining the currency of the training requirements, ensuring that changes in each individual's assignment and the required associated training were always up to date. This issue was partially addressed by developing project-specific training programs (such as for the 618-10 Burial Ground). Efforts were also aided by periodic issuance of qualification cards citing all of an individual's active training and by a database supervisors could check, which supplied up-to-date details on training of all active WCH employees.

Consequences / Benefits:

The implementation of this approach was contrary to that used by other prime contractors at Hanford and was not an approach that the customer was familiar with. This created many discussion opportunities on the unique approach to the assignment of training. Formal documentation was required that not only validated the nature of each individual's training but also documented the logic and mechanics of the program. This comprehensive training plan was provided to DOE for their review and approval.

Lessons Learned

The benefit to training on an as-needed basis was that it kept individuals working more hours on the job, minimized over training the workforce, maximized essential training, and kept the costs for unnecessary training to a minimum.

Implementation & Effectiveness:

The approach to the selective assignment of training was a very effective way to manage resources and schedule activities. The key to implementation was to educate all subject matter experts, supervisors, and responsible managers of this approach, and their responsibility to assign training as required. The clarity of assignment was also credited as a reason that the contract maintained an excellent safety record and had a minimum number of grievances and work shutdowns.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 2.1.2

Title: Develop Tools to Allow Ready Determination of Workers' Qualifications and Training

LESSONS LEARNED SUMMARY:

Having training assignment tools available to employees, supervisors, and responsible managers was key to ensuring that WCH maintained a trained and compliant workforce.

DISCUSSION

Description:

During the River Corridor Closure Contract transition, it was evident that the employees and management team needed resources to help aid in the tracking of individual's training, as well as technology that they could rely on to assist with the proper assignment of training.

To ensure that all employees had their immediate training records available to them, individual training cards were developed that identified critical safety-based training courses that were completed and the dates at which the training would expire. These cards were small enough that they could be carried on their person, most commonly in the person's badge holder. This initially gave the employees and supervisors a guideline to verify qualifications. This training card was intended to supplement the online training database because the hardcopy training cards could easily be out of date, and needed to be utilized as a reference, not an absolute.

In addition to individual training cards, an electronic database was developed for employees, training personnel, and the management teams that allowed individuals to easily search on training criteria to determine if an individual was qualified to perform the work. This database electronically tied the required reading training requirements associated with each position as well. In addition, notifications were issued well in advance when any training was coming due. A similar type of announcement was provided for required reading when a procedure revision had been issued.

This integrated approach reduced the number of incidents when work was performed with out-of-date required reading and/or training. Ensuring that a strong communications plan was developed to ensure that there was constant information being published on how and when to use these tools created a training culture that could be supported with few incidents.

Consequences / Benefits:

Providing the integrated tools to assign and track training offered the employees, managers, and supervisors an opportunity to track and manage training through a variety of methods. It was also designed to support an immediate decision if the training database was down or otherwise unavailable.

Implementation & Effectiveness:

To ensure the effective use of the training tools that were developed, it was imperative that there was a strong communications plan, training, and input from those using the system. In addition, training coordinators continued to be made available to ensure that there was a training-compliant workforce. Routine audits were also conducted by training personnel to ensure the accuracy of information reflected on the training cards and in the training database.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 2.1.3

Title: Establish an Online Required Reading Capability

LESSONS LEARNED SUMMARY:

A major component of the training and credentials process is required on-line reading--maintaining currency with procedures, policies, and practices essential to one's assignment. In many instances, these practices and policies may undergo frequent changes. Having a system to ensure personnel are current with their reading is a great help to supervision in ensuring workers' credentials are up to date.

DISCUSSION

Description:

As with any project, the number of technical and administrative procedures at WCH grew throughout the tenure of the project, many of which went through a half-dozen or more changes and revisions--some editorial, some substantive. In the WCH system, groups of classes and required procedures were identified for each major job activity (e.g., onsite supervisor, rad worker), and then the groups were assigned to individuals using a Training Assignment Tool (TAT) so that each individual had a very specific training regimen precisely aligned with their responsibility.

Because some of these training assignments included lengthy lists of associated procedures, an online capability was developed that notified personnel when revisions to procedures and policies were issued. In some instance, such as major changes to technical procedures, the changes might be reviewed by a supervisor with the entire crew at a plan-of-the-day meeting or in advance of a work assignment entailing the procedure. In these cases, the supervisor would send a sign-in sheet to Training, which then entered the completions on the individuals' training records.

In many other instances, the worker could go to a computer or kiosk and read the procedure. Because each worker (even field workers who did not have an individually-assigned computer) had an individualized account, the fact that the revised procedure had been read and the date automatically was recorded in their training record. A button also appeared when the individual had finished reading asking if the document had been both read and understood; if there remained any questions about what had been read, the individual could defer, so indicating until he/she had opportunity to discuss and get any needed clarifications from the supervisor.

Consequences / Benefits:

Providing multiple means of completing required reading allowed for maintaining both an efficient and current system to ensure workers were up to date on all aspects of training before work was undertaken in the field. The on-line version also allowed supervisors to determine when it was best to provide face-to-face training on revised policies and procedures versus when individualized reading was sufficient.

Implementation & Effectiveness:

Access to computers had to be provided via kiosks for those field personnel who did not have assigned computers. Also, conduct of operations expectations had to be reinforced, so that personnel were aware of the expectation that they actually understood the required reading in advance of doing work and had not just clicked through the readings.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 2.1.4

Title: Conduct Continuous Training Assignment Evaluations

LESSONS LEARNED SUMMARY:

To ensure that WCH maintained a trained and qualified workforce it was imperative to integrate program subject matter experts, responsible managers, supervisors, and work planning in the training assignment and evaluation process. It was also imperative that revisiting training and training assignments was critical towards the end of the River Corridor Closure (RCC) Contract.

DISCUSSION

Description:

During the RCC Contract, the training tools and technologies evolved to help provide additional tools to those individuals responsible for evaluating individual training assignments and managing a trained and qualified workforce.

To ensure that employees were properly trained before performing work activities, work control planners, immediate supervisors, and responsible managers would receive auto-generated announcements that provided periodic notifications regarding upcoming training expirations, individual training schedules, and training calendar announcements that ensured that all layers of management and employee were receiving information about upcoming training events.

As the RCC Contract entered the end of its contract performance period, the WCH staff maximized staffing resources to ensure that all project and functional positions had adequate resources. This meant consolidating resources and individuals taking on different primary and ancillary assignments.

During this period of consolidation and shifting of resources, it was imperative that those responsible for assigning work activity evaluated and updated the training assignments associated with the new job functions.

An effort was also made to coordinate training qualifications with the planned release dates of personnel so that retraining was kept to the minimum needed to allow personnel to complete their assignments.

Consequences / Benefits:

A consequence of shifting resources around and offering up new opportunities to the workforce at WCH during the final stages of its contract was that training requirements were not always evaluated to ensure that an employee had the necessary required training to perform the tasks associated with those new duties--or at the same time, did not continue to receive training that was no longer applicable.

The cultural expectation and responsibility for evaluating individual training requirements had a heightened awareness towards the end of the contract, and all parties impacted asked the right questions to ensure compliance.

Implementation & Effectiveness:

This issue was identified early in the final stages of the RCC Contract, and several communications plans were developed to target management and functional areas responsible for assigning training. In addition, the Training department received new assignment information from projects and functional organizations to help identify those individuals who may have needed additional training. This integrated approach created an effective implementation.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 2.1.5
Title: Provide Performance Management Training to All Supervisory Personnel
<p>LESSONS LEARNED SUMMARY: Broadening the training on the performance management system to all supervisory personnel makes them more effective in decision making by ensuring a project perspective.</p>
<p>DISCUSSION Description: As has been noted, the River Corridor Closure Contract (RCCC) was a cost-plus incentive fee (CPIF) contract. It was also a closure contract, meaning that when the work scope was done, there was no successor contractor. Both of these factors are different from most DOE prime subcontracts; most commonly, DOE uses cost plus award fee contracts using a management and operations (M&O) structure--meaning, as noted previously, that funding is provided annually and work is likely to continue through a number of successive contractors before all scope is complete.</p> <p>The challenge in the case of the RCCC was that the limited experience with this contract type--both within WCH and within DOE--often resulted in actions contrary to the principles of the contract. Most significant was the fact that the RCCC was funded for the duration of the contract, meaning there was limited ability to introduce large amounts of additional scope without changing the funding profile. Ensuring both technical and contract personnel understood the reasons for resisting the tendency learned through other contracts on continuously introducing new scope or new initiatives was central to timely completion of the contract.</p> <p>At the same time, the contract's use of both cost and schedule incentives meant that all levels of management had the potential for affecting not only safety, but also fees that were earned. Therefore, extensive Earned Value Management System (EVMS) training was not only required for all senior management and cost account managers (CAMs), but also offered to all management and supervision. Each manager's or supervisor's ability to make judicious decisions that considered all factors not only contributed to the contract's success but also enhanced each individual's credentials in preparation for assuming higher levels of management assignments.</p>
<p>Consequences / Benefits: Cost and schedule are important factors in all projects. Ensuring the entire supervisory workforce understands the underlying principles of cost and schedule management allows them to be active participants in the company's success. Without this support, decisions may be made that are counter to the overall company goals, or simply aligned with just the internal priorities of a single organization.</p>
<p>Implementation & Effectiveness: Implementing this lesson is a function of training, coupled with recognition. Course materials and instruction can be broadly shared among the supervisory workforce, with an understanding that fiscal and schedule accountability are an expectation for advances within the management chain. Also, as the individuals become more comfortable with the principles they can be appointed as CAMs and involved in performance discussions and even in EVMS audits, reviews, and certifications.</p>
<p>APPLICABILITY: <input checked="" type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input checked="" type="checkbox"/> Other (Explain) <u>Corporate Entities</u></p>

2.2 Property Management

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Lessons Learned

Lesson: 2.2.1

Title: Develop a Hands-On Approach to Conducting Annual Inventories

LESSONS LEARNED SUMMARY:

WCH maintained a contractual obligation to ensure that all DOE assets were protected and, in doing so, those assets were tracked and monitored by location and condition. Disposition of property was handled as work sites were closed, allowing for an up-to-date inventory process, complemented by the annual inventory. In addition, whereas the inventory initially was conducted between the property custodians and property management via email, WCH switched to using a hands-on annual inventory in which the property was physically viewed and bar coded by property management personnel.

DISCUSSION

Description:

It was recognized early in the River Corridor Closure (RCC) Contract that it was important to ensure the proper identification and location of all assigned property. This was no easy task with the inheritance of legacy buildings, equipment, and materials. This was in addition to the multiple remote project locations, the influx of equipment, and upgrades in technology.

These issues prompted the evaluation of how property management was regarded by WCH personnel, to what extent the property was being tracked, and what were the key components of property management that could create significant impacts to closeout.

The results of this evaluation ended in the restructuring of where the Property Management organization reported, how property was being inventoried, and resources provided to individuals responsible for managing the final dispositioning of property.

Initially the RCC Property Management was assigned to the Contracts and Procurement organization. This was effective during the procurement stages of new items, but did not offer assistance when existing property was moved from one work site to another. To ensure a closed-loop process, the Property Management organization was reorganized under the Information and Infrastructure Services organization and relocated to the site with the Warehouse and Facilities group. This gave the Property Management staff the opportunity to be integrated into the receiving and moving process, proving an additional line of defense.

It was determined that 100% annual inventories must be performed throughout the RCC Contract to ensure that areas of concern could be identified and resolved early. Through the 100% inventory process, the team was tasked with performing a visual inspection of all equipment, materials, and fixed property. This was done by utilizing project and functional personnel who were briefed on what they were looking for, who were assigned project personnel to assist with the validation of equipment/property, and who were integrated into the projects to ensure that all items were accounted for.

In addition to annual inventories, day-to-day property management activities were approached from a segmented closure. As work scope was completed, all property items were accounted for and either dispositioned or reassigned to an appropriate end user/location, and a visual verification was performed to ensure accuracy.

Consequences / Benefits:

Annual inventory loss rates were reduced to essentially zero, and all property records were complete and up to date, contributing to positive recognition in several independent audits. The attention to details during inventory, and the property management's approach to individual accountability, forced project personnel to address property management from an integrated perspective. Property Management was no longer considered an ancillary activity, but an integral part of work scope completion.

Lessons Learned

Dispositioning equipment was just as critical to scope completion as the work scope itself, and reutilization channels were developed so that all Hanford Site prime contractors were notified of resources as they become available. The Hanford Excess yard was consulted for offsite disposal of items, and all parties across the Hanford Site recognized the benefits of reutilization of resources and supporting the final dispositioning of items from the RCC Contract.

Implementation & Effectiveness:

The property management methods utilized on the RCC Contract were so effective that 4 weeks after field activities were transitioned and core business activities entered closeout, all property associated with the RCC Contract had been identified and dispositioned from WCH.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 2.2.2

Title: Routinely Assess Warehouse Operations to Ensure Alignment with Project Needs and Scope

LESSONS LEARNED SUMMARY:

Warehouse operations should be routinely assessed to ensure the processes and inventories keep pace with the changing needs of the project. The WCH warehouse activities were initially established to support the receiving and distribution of materials associated with River Corridor Closure (RCC) Project work scope. This initial charter evolved over the course of the project to include the storage of long-lead-time items, laundry storage, chemical recycle areas, and respiratory equipment storage. As the project transitioned toward closeout, the scope and approach were again modified.

DISCUSSION

Description:

As the RCC Contract evolved the WCH warehouse activities evolved with it. The warehouse was a perfect opportunity to not only provide receipt and delivery of incidental items, but their expertise also offered the project the ability to order long-lead-time items in bulk, or offer a controlled environment for frequently utilized equipment that needed to be maintained as a collection.

During the mid-stages of the RCC Contract, it was important to ensure that adequate resources were available to perform work, and the warehouse personnel received inspection training to ensure that the warehouse operation ran as smooth as possible. They gained efficiencies in performing the project buying functions, and could manage the warehouse resources by shifting materials and equipment to support high-priority work. In addition, warehouse personnel supported the ESH&QA organization when necessary.

As work scope was completed and multiple job sites were closed down, the warehouse operations needed to focus on the final disposition of all warehouse items. This meant that min/max levels had to be adjusted, just-in-time contracts were written with vendor restocking requirements being reduced, and the final dispositioning of stored assets.

The warehouse charter had to change from a full service storage facility to an on-demand receipt and delivery operation. In addition, legacy storage items had to be evaluated for their short-term use and dispositioned if they did not support the closeout of the RCC Contract.

This change in the warehouse operations was initially very difficult for the warehouse personnel to grasp. There was a fear that there would not be enough materials to support project work activities if the inventory was worked off to the lowest possible amount and still keep field work activities functioning. There were many discussions, inspections, and inventory reductions.

Consequences / Benefits:

The unintended benefits to getting the warehouse personnel on board with a work-off schedule and excessing plan was that they could eventually see the direction that the WCH warehouse was going, and offered better ways of performing work and enthusiastically offered areas that could be managed more effectively.

At the end of the RCC Contract, the WCH warehouse personnel had developed reutilization channels at Hanford to ensure that the materials were going to be reutilized instead of wasted, and that benefited the entire Hanford Site. In addition, the warehouse facilities were consolidated from a 40,000 square foot facility to a 5k square foot facility, and only essential items were transitioned to the CH2M HILL Plateau Remediation Company (CHPRC).

Lessons Learned

Implementation & Effectiveness:

The implementation process to downsize warehouse operations and eliminate long-term storage at the WCH warehouse was incredibly effective. The warehouse team (HAMTC and staff personnel) took an integrated approach to downsizing and were able to identify only the most essential items that needed to be transitioned.

Long-time legacy items were identified, tracked, and dispositioned early to ensure effective implementation of closure/transition. The warehouse personnel were the first on board to ensure that they were not holding up other RCC work scope completion activities.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 2.2.3
Title: Ensure Lease Versus Buy Requirements Are Understood
LESSONS LEARNED SUMMARY: A valid lease versus buy analysis needs to be done using Generally Accepted Accounting Principles and Cost Accounting Standards for any capital or operating property, plant, and equipment items.
DISCUSSION Description: All lease versus buy analyses need to conform to FAS 13 (aka ASC 840), Accounting for Leases; ASC 842, Leases; FAR Part 7, Acquisition Planning; FAR 31.201-3, Determining Reasonableness; FAR 31.205-36, Rental Costs; and CAS 40, Lease Cost. By not fully complying with the lease standards, leases were extended far beyond the point at which they were the wisest course of action. In some cases the leases were extended beyond the cost of the initial purchase price. When requests for equipment were made, the requesters often withheld vital information regarding the likelihood of contamination and also requested costly customization that was unnecessary for the work at hand.
Consequences / Benefits: By not using standardized equipment, monopoly sourcing was used at significant expense. Leases were continually renewed far beyond the cost of purchasing the equipment. The supplier(s) also charged brand new pricing when requested to provide end-of-lease purchase cost for equipment used for many years. Using proper analysis, appropriate lease terms and purchase pricing up front and at end of lease are known, and cost-effective decisions can be made.
Implementation & Effectiveness: Proper instruction and understanding of leases is needed by both DOE and its contractors. Being specific on the various rules and how they are applied, requiring auditable proof that lease versus buy analysis is being conducted, and holding all parties accountable will provide cost savings and transparency to how taxpayer money is being spent.
APPLICABILITY: <input checked="" type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 2.2.4
Title: Ensure Proper and Complete Accounting and Reconciliations For Capital Property
LESSONS LEARNED SUMMARY: Capital property needs to be entered into the system software (sunflower or other) completely and fully. Property accounts need to be reconciled monthly.
DISCUSSION Description: For the first half of the River Corridor Closure Contract, the capital property accountant did not enter all the relevant information needed for capital equipment and did not reconcile the accounts. As a result, the capital accountants in the second half of the contract had immense difficulty doing reconciliations or identifying appropriate accounting for the equipment. Entries to move property and equipment from "In Process" to "In Use" accounts were either not done or done incorrectly. This created a nightmare scenario for the accountants tasked with cleaning up and reconciling the property accounts. Significant time was spent internally and with the assistance of the DOE-RL property accountant to identify and resolve all the issues.
Consequences / Benefits: Entering each piece of equipment with all data fields completed, doing timely entries to record equipment in process and in use, and doing monthly reconciliations ensures that capital property is managed appropriately and well.
Implementation & Effectiveness: Using proper and complete accounting and reconciliations allows the contractor to maintain compliance with their contract and avoids costly time use in cleaning up the problems later that could create compliance and close out issues.
APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

2.3 Document Control and Records Management

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Lessons Learned

Lesson: 2.3.1

Title: Keep the Procedure System and Hierarchy Simple

LESSONS LEARNED SUMMARY:

At the time of assuming the contract, WCH had to integrate procedures from several different contractors. WCH utilized a graded approach to establish a streamlined two-tier procedure system to perform the River Corridor Closure work.

DISCUSSION

Description:

As a first step in establishing the new procedure system, WCH blue-sheeted the incoming procedures. Then the process looked at the procedure formatting, the review and approval process, and the hierarchy.

Typically procedure hierarchy systems encountered on DOE sites consist of four or five levels of procedures (generally driven by management levels). WCH utilized a two-tier procedure system supplemented with compliance matrices. Compliance matrices were utilized to provide for a segregated set of documents to demonstrate how the requirements were implemented through the procedures, eliminating "cluttering" of the procedure text by including the requirement reference (driver) in the procedures.

This streamlined procedure system was implemented by subject matter experts (SMEs) within the function groups assigned the responsibility for the procedure development, approval, and maintenance. In some instances, such as Radiological Controls, a separate set of management system requirements were developed to further streamline the review and approval process; this step was also aided by establishing different review requirements based on whether changes were substantive or editorial.

Lastly, the forms supporting the process were simplified, reducing the number of required signatures and the additional routing through unaffected organizations.

Consequences / Benefits:

Avoiding multiple layers of procedures eliminates redundancy and added conservatism that creates confusion for the workforce and increases the cost of performing work.

Implementation & Effectiveness:

A streamlined procedure system must have the depth to provide the projects with all the processes that will be required to achieve the goal. If the procedure system is missing a process, then each individual manager may take the initiative to issue their own set of procedures to accomplish their goal, which would defeat the effectiveness of a streamlined procedure system. Each manager needs to support the development and maintenance of a streamlined procedure system. Functional managers and SMEs need to understand the project needs and work closely with the project to provide usable procedures.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 2.3.2
Title: Coordinate Capture of Records Maintained in the Field
LESSONS LEARNED SUMMARY: Identifying and capturing official records is important to the success of a company in every aspect. To be successful in documenting this valuable resource, Records Management (RM) must build a strong line of communication with the field to ensure records are being identified and captured accurately.
DISCUSSION Description: Records Management maintained communication with the organizations through routine Records Inventory & Disposition Schedule (RIDS) updates, onsite visits, and personal communication. WCH found that periodic RM visits to individual groups were successful. This was used as an outreach to assist groups in identifying records, facilitate the retirement of record information, and strengthen the communication between the organizations and RM. Providing expert record oversight helped organizations understand their records and in return allowed RM to document new records and their custodians. Whenever documents were found in buildings awaiting demolition, the project organizations alerted RM, who had time either to review the records in place or to have them transferred to a location where they could be staged for review. One of the most successful efforts was instituted when the contract began to approach closeout and was routinely releasing staff. Rather than the field or the individual leaving the project make the determination as to which, if any, documents they possessed were records, the records were left in the files and then RM personnel would go out and review the files and provide the appropriate disposition.
Consequences / Benefits: Failure to identify record material can be costly to the company, whereas understanding what records a company is creating, where active records are located, and the volume of the information can assist management in budget and resource planning.
Implementation & Effectiveness: WCH implemented a consistent communication between the field and RM through the annual refresher training, company-wide daily bulletins, emails, and personal communications. WCH also implemented a routine RIDS that identified records volumes, location, custodian, retention schedules, and final disposition of the records. This enabled RM staff to work effectively with records custodians and assist in efficiently indexing and archiving records to the Records Holding Area.
APPLICABILITY: <input checked="" type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 2.3.3

Title: Minimize Loss of Records Information Contained in Emails

LESSONS LEARNED SUMMARY:

In the course of conducting business, many business decisions and key support detail are recorded in emails. In comparison to documents and formal correspondence that have a controlled distribution through document control, the vast volume of emails that contain information crucial to supporting decisions does not have as obvious a collection mechanism. Therefore, education and administrative controls need to be provided for all project personnel to follow.

DISCUSSION

Description:

The WCH procedures always stipulated that emails containing information supporting business decisions needed to be transmitted to the records organization; however, that requirement, in-and-of-itself, was not sufficient to ensure records were captured.

Training was provided through the annual Hanford General Employee Training (HGET) required of all personnel. In addition, guidance was routinely provided delineating the types of information that would warrant an email to be captured in the records system. Personnel could simply then add document control as a "cc" or a "forward" for such emails.

As the project progressed and reductions in staffing were routinely occurring as work scope was completed, additional controls were added. In particular, coordination between management and Information Technology ensured that the complete email file was retained for personnel who had probability of having emails critical to business decisions (such as procurement personnel who had been involved with subcontracting). The appropriate manager was then given access to the files so that the collection could be searched and any emails requiring capture could be provided to Records Management. This allowance provided a level of confidence that critical information would remain available and that an independent review by a manager would further minimize loss of vital information.

Consequences / Benefits:

Numerous emails that would have otherwise been deleted or not known about subsequent to an employee leaving the company were identified and captured in the records system. This was particularly true in groups such as procurement whose files were important later on for such uses as completing subcontractor allowable cost audits. Without taking extra steps, beyond the typical administrative controls, it is unlikely that much vital information would have been accessible or retrievable.

Implementation & Effectiveness:

The use of administrative controls complemented by training was effective in establishing the expectations for handling of emails potentially containing records material. However, it became evident that the diligence needed to keep up with the capture of email records required additional efforts. By retaining access to email files subsequent to the loss of key personnel, the risk of losing vital information was minimized.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 2.3.4

Title: Design the Records Inventory Process to Promote Effective Records Ownership and Records Management Practices

LESSONS LEARNED SUMMARY:

To be successful, a records program must be owned in large part by the individuals who produce and maintain the records prior to their transfer to the Records Management (RM) group for archiving. Designing a process for conducting a records inventory and maintaining an accurate Records Inventory Disposition Schedule (RIDS) should be part of the records strategy to reinforce the right sense of ownership, responsibility, and accountability for the records among the records generators.

DISCUSSION

Description:

The RIDS identifies government-owned records, custodians, media, location, retention requirements, volumes, and instructions for final disposition of the records. RIDS included all WCH government-owned records, custodians, media, location retention requirements, record volumes, and final disposition of the records. This crucial tool facilitates RM and Document Control in identifying and retiring all company records in a timely manner. Records document a company's decisions, facilitate planning, and decrease audit and legal costs.

Developing a complete and accurate records inventory is a time-consuming and arduous task. In the first few years of the project, the inventory process was largely conducted by one or two records specialists; this approach was very time consuming, organizations were done sequentially, and the actual people maintaining the records held little accountability for or ownership of the program.

As a first step forward in the annual inventory process, individuals were requested from each WCH organization to assist with the inventory. Each inventory cycle began with training sessions for these appointed individuals to review the basics of records management, provide consistent guidance on how information was to be recorded (e.g., location, records volumes, custodians, etc.). Although improved, the process still was slow and there was a lack of ownership because these were only engaged for that short period while the inventory was conducted. This resulted in each inventory cycle beginning as if there had been no previous inventories.

Finally, the change was made in the process and procedures that designated the actual owners of the records with more responsibility and accountability for the records program. Records custodians were appointed, and these individuals had continuing responsibility for the records in their organization. This distributed ownership, coordinated through the small central organization, led to numerous improvements in the quality and timeliness of the audits. Updates were more timely and the formal documentation from each inventory became the base information for the subsequent audit--eliminating much of the redundancy in the process. This localized ownership also provided the foundation for other enhancements--including ensuring overall records management practices were complied with and defining training opportunities to increase program integrity.

As the project neared completion, more and more of the inventory process was turned back to the records management team, with updates sent to the remaining custodians on a quarterly basis. However, what had initially been a process that ran for 30 or more days had been reduced in all the successive years to a process that was completed in 2 to 3 days, with a much higher degree of confidence in the information collected.

Consequences / Benefits:

Without a coordinated RIDS program, records can be lost, causing projects to be delayed. Missing, misplaced, or unaccounted for records can adversely impact audits or legal issues. As the project

Lessons Learned

approached closure, there was full confidence in the knowledge of where all the records materials were, the volumes, and the nature of the records. It also allowed for a continuing program of cleaning up files and archiving records that was reflected in the fact that within 30 days of entering the closeout office, all records--with the exception of corporately-owned records and those in use in the closeout office--had been appropriately dispositioned.

Implementation & Effectiveness:

The RIDS process should be considered from the vantage point of the time frame needed to conduct the inventory and the accuracy and thoroughness of that information. A balance needs to be struck between what roles are to be played by the central organization and which by the local custodians. Some verification of accuracy and thoroughness should be conducted by the central organization, assisted by routine audits by the Quality Assurance organization. The actual quality of the inventories will be evident based on the project's ability to respond to audits (of functions and activities--not just the records group) that require timely and complete availability of requested records.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 2.3.5

Title: Establish an Efficient Process for Archiving Electronic Records

LESSONS LEARNED SUMMARY:

Creating a tool to eliminate the middle-man and utilizing existing processes were cost effective and efficient when implementing the new process of transferring scanned records to the Integrated Document Management System (IDMS) Electronic Records Repository.

DISCUSSION

Description:

In 2011, WCH was directed by DOE-RL to begin transferring scanned records to the IDMS Electronic Records Repository instead of transferring the physical records to the Records Holding Area (RHA).

A team composed of WCH Document Control, WCH Information Technology (IT), and IDMS Administration personnel met to determine the programming and resources that would be needed to download the PDFs from Content Management and the meta-data from the Document and Record Tracking System (DARTS) for upload into IDMS.

Since IDMS is a records repository, every record in IDMS must have a retention schedule. The team decided that Document Control would continue with their existing process for archiving records since the physical records were filed by retention schedule and it would be easy to modify DARTS to tie a retention schedule to a box number.

The Document Control basic work flow process was kept intact with additions and changes made to either the front- or back-end of the process.

The existing DARTS validation table for box numbers was modified to include a field for the retention schedule. The format for electronically transferred (ET) box numbers was established along with a number issuance log. When a box was ready for archival (i.e., the physical box was full), an ET box number would be assigned and the ET box number along with its retention schedule were entered in the validation table.

IT created a tool that allowed Document Control to self-perform the download of files by the ET box number. A meta-data file was created for each PDF that included the predetermined fields from DARTS and the retention schedule. When the downloads were complete, the files would be copied to an external hard drive that was hand delivered to the IDMS Administrator.

IT also created a program that notified Document Control when a record that had been transferred to IDMS was modified in either DARTS or Content Management. The same tool used for downloading files could also create a list of modified records so Document Control could update the records in IDMS.

Consequences / Benefits:

The cost of transferring scanned records to IDMS was minimized. Document Control could self-perform the downloading without IT's involvement, and any impacts to the Document Control's daily processing of records were minor resulting in no loss in productivity.

Implementation & Effectiveness:

The first transfer of electronic records to IDMS was on July 28, 2011, and was a huge success. There were two factors key to the success of the new process: 1) keeping the existing Document Control work flow process, and 2) the creation of a tool that allowed Document Control to self-perform the downloading of files.

By keeping the existing work flow process, it was easy for Document Control to add the new process to their

Lessons Learned

daily routine record processing with no loss in productivity. The tool created by IT streamlined the process by eliminating IT as the middle-man, providing an efficient way to accurately download files, and providing a process for identifying when records had been modified that had been transferred into IDMS.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 2.3.6
Title: Provide a Means to Capture Records as Personnel Depart the Project
LESSONS LEARNED SUMMARY: A uniform notification system used for exiting personnel allows management to identify the employee's records and reassign them to a new custodian. This early notification ensures employee's records will be reassigned or retired.
DISCUSSION Description: A system was implemented at WCH known as the Personnel Notification System. Basically, this system provided early notification among the organizations involved with final checkout of personnel leaving the project (i.e., Property, Records Management [RM], Human Resources, Information Technology, Document Control). The Personnel Notification Form (PNF) Administrator sent out a notification to organization points of contact in advance of employee exits. This early notification is utilized to ensure tasks related to the individual have been completed and equipment or records have been returned. RM utilized this advance warning to identify a new custodian and offer the exiting employee any assistance they might need to retire records that are no longer in use. RM and management also worked out a monthly report that covered all exiting employees. With the exception of a few employees who left before the designated time, the notification and the report enabled RM to keep a more accurate accounting of company records. Custodial and record changes were recorded on the Records Inventory & Disposition Schedule (RIDS) by RM.
Consequences / Benefits: The advance notification of exiting personnel gives RM and Document Control enough time to capture/reassign records. In this manner records are not lost or destroyed. Records are vital to the timely completion of projects and company economics. They are also crucial for legal and audit purposes.
Implementation & Effectiveness: RM utilized the notifications by the PNF Administrator to keep track of record material and ensure new custodians were identified for exiting personnel. In the beginning, RM did not receive all exiting notifications, which impaired RM's record accuracy. Management fixed the malfunction by ensuring RM received all exit notifications. In addition, management provided RM with a monthly report on all exits. The early notification and follow-up monthly report gave RM the needed tools to track records, ensure inactive records were retired, and make contact with the new custodian. In this manner records were not lost or forgotten and the RIDS was updated as changes took place, which gave WCH a real-time view of the company's record material, volumes, and location of custodian. See also Lessons Learned 3.2.6, Implement Processes That Ensure Capabilities Are Not Jeopardized by Reducing Staffing.
APPLICABILITY: <input checked="" type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 2.3.7

Title: Review Vacated Areas for Record Material

LESSONS LEARNED SUMMARY:

As one of the last guards to capture records, Records Management (RM) should review any area that has been vacated. The early notification to RM of vacated mobile offices and project sites should be formalized to ensure records are not lost or destroyed in the demobilization process.

DISCUSSION

Description:

Records Management should be notified in advance of buildings or areas that are to be vacated. Early notification allowed RM enough time to coordinate a site visit.

RM's review included a systematic inspection of desks, shelves, file cabinets, and laydown areas for potential record material.

Discovered records were sent to Document Control or RM for retirement in accordance with the direction provided by the Records Inventory & Disposition Schedule (RIDS).

Active records were turned over to a designated custodian.

Consequences / Benefits:

Without the expert review of RM, record material could be overlooked, lost, or destroyed. Loss or destruction of record information could impact productivity, financials, audit responses, or legal actions.

Implementation & Effectiveness:

In the beginning, RM was not consistently notified when buildings were being vacated. Once this came to RM's attention, RM worked with facilities to come up with a plan wherein RM was notified consistently of any buildings or office areas that were scheduled to be dismantled.

The line of communication between RM and facilities allowed RM to identify, capture, and process any records that were left behind before the buildings and/or office equipment was removed. This method ensured company records were not lost or destroyed.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 2.3.8

Title: Develop a Plan for the Physical Protection and for Recovery of Damaged Records

LESSONS LEARNED SUMMARY:

Records are an important asset to a company, and it is imperative that measures are taken to protect this resource. Protecting records is the first line of defense against significant loss of vital information. The second measure is to prepare for an unexpected catastrophe by maintaining a mobile fully stocked restoration kit and staffing a trained team of experts to handle any recovery effort. Procedural planning to safeguard records ensures the company will have the vital resources it needs to meet its goals.

DISCUSSION

Description:

All WCH records were protected from adverse elements (e.g., water, fire, and theft). Records were kept in fireproof cabinets or an area that minimized potential loss or damage and kept in a locked cabinet, room, or secured facility when unattended.

In-process records stored in a locked room were draped with plastic and placed several inches above the floor on racks to prevent water damage.

Restoration kits with basic supplies were maintained, such as a restoration procedure, clipboards, contact lists, flashlights, plastic, rope, clothes pins, portable radios, and any item that would allow the team to quickly and systematically sort, dry, index, and re-box damaged records. In the one instance where water damage occurred, the clothes line method of drying records coupled with industrial fans, a proven restoration method, was used in the recovery and restoration of records. This effort also included meticulous labeling and indexing of the material as it was laid out to dry, preventing the records from being lost or re-boxed incorrectly.

WCH was able to test its restoration procedure when an overhead fire system sprinkler pipe burst in a building in 2006, compromising boxes of records. WCH's restoration process was methodical and covered every aspect of restoring and tracking compromised records. The mishap provoked Records Management (RM) into evaluating how they could better protect their record material.

RM discovered that their restoration kit was well-equipped. The exercise gave them additional ideas of tools needed in the restoration kit. The additional equipment was added to the kit and noted in the restoration procedure. The well thought out restoration program saved the company money and valued resources. The team was effective in the restoration process and RM realized minimal damage to records and no loss of records.

Consequences / Benefits:

Proactive preparation for safekeeping of records materials helped ensure a process and the needed materials were available when needed. Being able to put the plan in motion during the single event that did occur not only allowed an expedient and immediate response, but it also avoided what could have been significant adverse impacts to the project consequent to the loss of important information. Moreover, the costs for the preparation--the training and recovery kits--were very small, especially when considered against the potential costs of losing critical information.

Implementation & Effectiveness:

The risks to records, while in the custody of the record generators and when in the hands of the records organization, need to be carefully assessed. Once this assessment is made, a plan needs to be developed that specifically addresses the risks (either through eliminating the risk or determining how to respond should the event occur). The records personnel then need to be trained on the correct recovery procedures, and routinely have these procedures reviewed to ensure the staff is prepared should an event occur.

Lessons Learned

APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 2.3.9

Title: Provide Training to All Personnel Who Indirectly are Part of the Records Management Process

LESSONS LEARNED SUMMARY:

Management of records extends to a very broad community--well beyond that of the records organization. Managers, administrative assistants, publications personnel, and information technology personnel all are components of a robust and comprehensive records management system. Limiting training to just the records personnel and records custodians is insufficient and can lead to extra work to ensure documents and records are appropriately prepared and processed. Training must be provided and tailored to each of the contributing communities.

DISCUSSION

Description:

On a regular basis, Document Control found issues with documentation and the processing of records materials.

Basic issues with correspondence (formatting, assignment of reference numbers, distribution, missing signatures, missing dates, typos, pagination, illegibility) were observed on a routine basis. Some issues could not be corrected because Document Control received the correspondence after it had been distributed.

Although a company style guide had been produced, it was largely filled with material on grammar and punctuation that caused it to have limited use. Outside the publications organization, the document was not recognized as having value or application. Providing a streamlined document that made clear what the process and expectations were for document creating and management would have been a more effective tool.

There were also issues with complying with general records management principles. As example, there were some issues with document numbering because document authors would check what had been published using the online document systems rather than reserving a number from Document Control; the result would be that Document Control would receive two different documents with the same number. This situation might also be exacerbated by the author already having done his own distribution, requiring recalls and clarifications to all recipients.

Other issues involved such concerns as the following: timeliness of submitting completed records for indexing and archiving, records submitted directly by the field to archiving were sometimes incomplete or illegible, and procedures written by the generating organization to control certain records types were not precise enough to ensure records requirements were satisfied.

A conservative estimate of the time spent, by Document Control alone, on rework and resolving issues with documentation for the life of the River Corridor Closure Contract was 1,154 hours (2 hours per week times 577 weeks) or 28.85 weeks (1,154 hours divided by 40 hour work week).

The number of issues with these documents and the preparation of records would have been reduced considerably if formal training (targeted at the specific functional involvement) had been provided. For example, while those preparing the document needed to understand the style requirements and processing requirements, the management and supervisors needed to have a better appreciation of how the document control and records management program worked so as to avoid introducing unintended problems.

Consequences / Benefits:

Not having trained resources can readily adversely affect the integrity of the records management and document control programs. Equally, if not more important, lapses in quality can also adversely affect the company reputation. Basic, routine training can greatly reduce these problems, supported by procedures and

Lessons Learned

support documents (e.g., a focused project style guide).

Implementation & Effectiveness:

Materials and training needs to be developed that acquaint all involved personnel with the expectations and processes used in the document control/records management functions. These tools must be appropriately tailored, recognizing that all records and document control-related activities conducted by those outside the actual document control and records organizations are peripheral or ancillary duties.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

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2.4 Information Technology

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Lessons Learned

Lesson: 2.4.1.

Title: Carefully Evaluate When to Use In-House Versus Procured Information Technology Services

LESSONS LEARNED SUMMARY:

Information Technology (IT) support is an area that is often approached as either a comprehensive in-house capability or a fully outsourced (or subcontracted) function. However, a balance may be needed in order to achieve the best cost, flexibility, and priority for IT services.

DISCUSSION

Description:

In contrast to the other Hanford prime contractors who are required to procure their IT services from the site infrastructure contractor, the WCH contract provided full flexibility: WCH could self-perform, procure some services, or procure all services; if services were procured, they could come from the infrastructure contractor or from a commercial vendor. This somewhat unique position allowed WCH to assess and take advantage to the configuration we felt best served the project.

Initial evaluations suggested that self-performing was in WCH's own best interests. Using the infrastructure contractor could not guarantee the prioritization needed; would require aligning business practices with the existing infrastructure, which would not necessarily allow the tailoring and alignment to WCH's proposed approaches to conducting business; and could likely end up being higher rather than lower costs (owing to the cost recovery model used by the infrastructure contractor). At the same time, one or two functions appeared to be suitable for contracted support rather than added full-time staffing (e.g., help desk operations, software quality assurance support). WCH also decided to establish and maintain its own server room and internet capabilities.

Over time, this balance worked very effectively. Little to no network downtime occurred; the right balance of application talent and resources was available when an enterprise system was introduced to replace the original human resource, procurement, and finance applications; a network was developed that supported the many field operations that were working concurrently at great distances from one another; and a minimal staff (approximately 12) that supported by a few contract individuals sustained all project needs.

As contract closeout approached, needs and resources were continually reassessed. The help desk was eventually absorbed into the work done by the application support personnel, a contract was placed for the infrastructure contractor to host our servers and network, and two IT personnel were brought forward into the closeout office--one to ensure the uninterrupted availability of our network and one to provide application and help desk support.

Overall, looking at individual IT functions from the standpoint of cost, priority, availability, and flexibility allowed WCH to have excellent service at a very reasonable cost.

Consequences / Benefits:

Evaluating and configuring each of the IT functions based on cost, ability to respond appropriately to priorities, and flexibility provided an excellent approach throughout the 10 years of the contract.

Implementation & Effectiveness:

Once the assessment is completed, metrics and data need to be maintained that examine customer satisfaction, system downtime, response times, and cost. There should be a mechanism and willingness to reevaluate whether work is self-performed or subcontracted based on this performance, with recognition that

Lessons Learned

changing the configuration may be on a function-by-function basis rather than a wholesale change to all IT functions.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 2.4.2
Title: Establish an Application Disposition Plan
LESSONS LEARNED SUMMARY: Records should be kept of all applications in use on the project. Plans should be developed that consider the current and planned use, along with final disposition. This disposition plan is essential to ensure appropriate steps are taken to safeguard the data generated in and maintained by the applications.
DISCUSSION Description: Well in advance of initiating closeout, a formal plan was put together detailing all the applications in use on the project, the intended duration of use of the application, and the disposition of the data collected and controlled by the application. The exercise brought to light many concerns about how the final data capture was to be handled, along with more precise projections of ongoing costs (particularly for those purchased applications that had charges assigned based on the number of active seats). The development of the plan required discussions between Information Technology (IT) and each application owner, and, in some cases, as with applications dealing with long-term stewardship, close coordination with the organizations that were to inherit both the applications and the data subsequent to completion of remediation activities.
Consequences / Benefits: Having a disposition plan assisted in many decisions about costs, numbers of seats, and other factors throughout the final years of the project. Because the contract work scope was being completed in phases, decisions reached as work components were completed provided much better bases to make determinations regarding the continued use of the applications.
Implementation & Effectiveness: IT worked with each application owner to develop a disposition plan that covered both the final years of use and the plan for the application and data subsequent to completing the affected work scope. Working together also allowed actions, whether adjusting licenses or modifying applications, to be seen in a broader context that supported overall project schedules and costs.
APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 2.4.3

Title: Provide Dedicated Support to Maintain Software Quality Assurance Documentation

LESSONS LEARNED SUMMARY:

WCH had relatively few safety systems that had applications that had to be maintained consistent with software quality assurance requirements. However, even with these few safety systems, initial reviews indicated that several applications had less than adequate or less than current documentation.

DISCUSSION

Description:

Maintaining the quality and currency of the documentation for applications that meet the standards for requiring formal software quality assurance (SQA) documentation is of vital importance to the project. Not only does the documentation constitute the technical basis for the application, it provides the assurance that work is being performed safely and appropriately.

In the early reviews of the safety documentation used by WCH, several issues were identified in an independent review that required that the SQA documentation not be the ancillary assignment distributed among several Information Technology (IT) professionals, but, rather, should be the exclusive assignment of someone who had expertise in SQA documentation.

After bringing an individual in specifically for this purpose, the documentation was extensively overhauled to ensure it met SQA standards, then went through several levels of reviews--including a follow-up independent review--to validate the standards were not being met. This effort was important in reestablishing the support and confidence of the customer.

It also helped shape the path going forward so that when an issue surfaced about how certain calculations had been made by a subcontractor the issue could be quickly addressed and resolved.

Consequences / Benefits:

Having a dedicated individual who established and maintained critical safety and business software not only improved the quality and currency of the documentation but also was the cornerstone in building a positive relationship with the client as regards SQA and the IT program overall.

Implementation & Effectiveness:

The main step is in the assignment of work--moving from a distributed to a dedicated support for developing and maintaining SQA documentation. This person was also assigned the responsibility of being liaison with the project owners of the applications and the client's counterparts.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

2.5 Finance

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Lessons Learned

Lesson: 2.5.1

Title: Establish a System to Ensure Correct and Timely Completion of Time Cards

LESSONS LEARNED SUMMARY:

An issue that arose at Hanford among the prime contractors was ensuring that time cards were accurate and filled out in a timely manner. Accordingly, it became a priority to ensure that appropriate controls were in place to support any reviews or audits.

DISCUSSION

Description:

In addition to standard floor checks conducted by Internal Audit to assess whether personnel understood the protocols for completing time cards was adequately understood, WCH also conducted random interviews (often with shift personnel in the field). However, WCH wanted to have more specific administrative controls so as to provide confidence in our time card system. Accordingly, an electronic capability was added that alerted an individual and their management if any of the following conditions occurred: a) time cards had not been completed for the day before by 6:00 a.m.; in this instance, a notice to complete the time cards was sent out; 2) a notice at 10 a.m. indicating that the time card was delinquent; and 3) notices if a time card was filled out for that work day before 3 p.m.

In addition, monthly reports were issued to all managers that showed the personnel who had had delinquencies with completing time cards and the percent of delinquencies for the previous month and the previous quarter. Managers were required to meet with any persons whose delinquencies were above a certain threshold to reacquaint them with the requirements. Any further problems could result in more formal discipline.

Consequences / Benefits:

Over the course of the contract, WCH continued to receive excellent results on floor checks and several independent audits that were conducted. The issues that had been evidenced with other Hanford prime contractors did not occur at WCH. These practices also contributed to supporting related timekeeping reviews--such as concerns that had been raised at Hanford regarding whether personnel on shifts were accurately recording time.

Implementation & Effectiveness:

Maintaining commitments to administrative controls requires strong management support. The approach of providing monthly reports to management maintained the visibility of the initiative, and quickly isolated those individuals who were not in compliance. This initiative was recognized by DOE as a best practice.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 2.5.2

Title: Maintain Adequate Resources to Support Audits

LESSONS LEARNED SUMMARY:

Staffing for several organizations, but most specifically Finance, was often less than needed to support the numbers of audits--both internal and external. In developing a staffing plan, some allowance needs to be made to provide the depth of resource that can respond to the audits and requests that will occur over the life of the project.

DISCUSSION

Description:

In addition to the audits and evaluations each business function performs to maintain the efficacy of their systems, business functions like Finance were subject to a host of independent reviews and audits. Internal Audit, for instance, was likely to conduct, at minimum, annual floor check audits, incurred cost audits, and p-card audits. These audits were complemented by audits by outside agencies, such as the Inspector General, based on issues that may not have occurred locally, but were part of a broader agency review. Then there were audits such as the Incurred Cost Audits conducted by the client, and any number of support audits. In addition, Finance played a big role in audits in which they were only indirectly involved, such as subcontractor allowable cost audits. At one point in the contract, there were approximately two dozen audits at the same time that Finance was supporting.

Support of audits required much more than simply answering questions. Extensive document reviews were required, many of which required retrieving records from archives or discussions with the technical personnel to identify the appropriate records. There was the need to provide extensive numbers of samples to the auditors; in some expense categories, it was not uncommon to receive requests for 60% to 75% of the individual cost entries. Also, drafting of audit responses could entail further research, documentation, and management reviews.

Although recognized late in the process, WCH eventually established two people in the Finance department whose full-time assignment was audit support. Among the other Finance personnel, and those in organizations like procurement, IT, and project controls, it generally required two to four full-time equivalents in support of audits.

Having people dedicated to supporting and responding to audits had significant value--not only was the response time and the quality of response improved, the working relationships with external audit agencies (particularly those assigned to conduct incurred cost audits) became better. Whereas previously the iterative nature of request and response had been greatly elongated while the two sides tried to fully understand what information was being solicited and why, more direct communication began to replace the strings of emails (many of which needlessly brought the DOE into the process).

In addition, the dedicated support personnel were often able to anticipate areas of greatest interest to the auditors and were, in the case of incurred cost audits, to stage much of the documentation well in advance of the audits, further expediting the process.

Consequences / Benefits:

Responding to audits initially had the detrimental effect of taking people away from their primary assignments, often for protracted periods of time. This additional burden often adversely affected the major business functions. There was also a less-than-adequate response to auditors owing to the assignments being ancillary to the main job and only performed intermittently. Assigning dedicated personnel, who had a background in finance, contracts, and law, made a major difference in the timeliness, quality, and resolution of issues and questioned costs identified by auditors.

Lessons Learned

Implementation & Effectiveness:

Staffing needs to consider the number of anticipated audits and the role finance and other business personnel are expected to play in terms of providing auditors with documentation, dealing with questions from the auditors, and responding to auditors issues and questioned costs. This scope of work should be routinely assessed to ensure that conditions have not changed to where response quality and time is declining. If dedicated personnel are assigned, careful attention should be paid as to how they are integrated with the Finance organization and the types of expertise and experience they bring with them.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 2.5.3
Title: Take a Phased Approach to Closing Out Incurred Cost Audits
<p>LESSONS LEARNED SUMMARY: Annual incurred cost audits were required for each fiscal year of the contract. These audits, conducted by the client using an independent audit firm, validated the allowability and allocability of all costs incurred. As such, these audits were a major undertaking, often requiring months of documentation reviews. The final audit report cited all questioned costs, which then required management responses before being provided to the contracting officer, who had final authority for disposition of the issues and questioned costs. As has been shown in numerous reviews, the ultimate closing of these audits was often the critical path item in closing out a contract. For a multi-year contract, leaving the resolution to the end of the contract may create real difficulties; rather, a plan should be put in place to close annual reports in a phased manner.</p>
<p>DISCUSSION Description: WCH was a 10-year contract, with 10 separate incurred audit reports (one for each fiscal year). As the contract entered its last two years, it became evident that settling and closing the audit reports was going to be the major hurdle to a timely closure. Therefore, WCH began looking for a means to expedite the process.</p> <p>Whereas the first two years of incurred audits had been closed in fiscal year (FY) 2015, the audits for the years from FY 2007 through FY 2014 were all still open, with the audits for FY 2015 and FY 2016 still to be conducted. An analysis of the issues in the completed, but open, audits indicated that there were four issues (overtime training, subcontractor allowable cost audits, safety-related expenses, and use of bottled water) that were cited in all the audits from FY 2007 through FY 2012. In addition, there was one other major issue cited during this period (time cards from one of the pre-selected subcontractors that had been misplaced).</p> <p>Working together, Finance, Procurement, and Internal Audit developed white papers, including formal settlement proposals for the questioned costs assigned to all five issues. Working with the DOE Assistant Manager for Finance and the Contracting Officer, a series of settlement meetings were set up at which the white papers were reviewed, additional documentation requested by DOE-RL provided, and, ultimately, agreements reached on each of the five issues. Moreover, for three of the issues (overtime training, safety-related expenses, and use of bottled water), the settlement included projected costs for FY 2013 through FY 2015, essentially closing them for the term of the contract.</p>
<p>Consequences / Benefits: Whereas closing of incurred cost audits was anticipated to be an action extending well into the tenure of the closeout office, all but a few items on the FY 2015 audit were closed by the time the closeout office was opened. Without taking the step of a phased approach to the audits, not only would the duration of the action be elongated, but also would have been more difficult in that many of the resources needed to resolve the issues would have been gone.</p>
<p>Implementation & Effectiveness: Incurred cost audits should be addressed as quickly as possible. Opportunities to close out a single year or a group of years in advance of completing the contract period of performance should be carefully examined, and a plan worked in conjunction with the Contracting Officer established for addressing issues in a timely (phased) manner.</p>
<p>APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____</p>

Lessons Learned

Lesson: 2.5.4
Title: Conduct Valid Lease Versus Buy Analysis
LESSONS LEARNED SUMMARY: A valid lease versus buy analysis needs to be done using generally accepted accounting principles and cost accounting standards for any capital or operating plant, property, and equipment items.
DISCUSSION Description: All lease versus buy analysis needs to conform to FAS 13 (aka ASC 840), ASC 842, FAR 7, FAR 31.201-3, FAR 31.205-36, and CAS 40. By not fully complying with the lease standards, leases were extended far beyond the point where they were the wisest course of action. In some cases the leases were extended beyond the cost of the initial purchase price. When requests for equipment were made, the requesters often withheld vital information regarding the likelihood of contamination and also requested costly customization that was unnecessary for the work at hand.
Consequences / Benefits: By not using standardized equipment, monopoly sourcing was used at significant expense. Leases were continually renewed far beyond the cost of purchasing the equipment. The supplier(s) also charged brand new pricing when requested to provide end-of-lease purchase cost for equipment used for many years. Using proper analysis, appropriate lease terms and purchase pricing up front and at end of lease are known, and cost-effective decisions can be made.
Implementation & Effectiveness: Proper instruction and understanding of leases is needed by both DOE and its contractors. Being specific on the various rules and how they are applied, requiring auditable proof that lease versus buy analysis is being conducted, and holding all parties accountable will provide cost savings and transparency to how taxpayer money is being spent.
APPLICABILITY: <input checked="" type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 2.5.5
Title: Miscellaneous Finance Lessons
LESSONS LEARNED SUMMARY: There were general, common sense actions that were taken to improve financial work processes.
DISCUSSION Description: Throughout the contract, the following good work practices were noted: <ul style="list-style-type: none">● Organize online files. Scattered files prevent documents from being found when needed and encourage an appearance of "hiding" files from coworkers and management.● General Ledger accounts should be reconciled and reviewed monthly. All issues should be resolved in a timely manner.● Ensure that General Ledger accounts are set up correctly so that future reporting will not be compromised by a lack of foresight at the beginning.● Aim to be the best stewards of taxpayer funds.● Ensure that everyone is aware of contract compliance requirements, and that they are followed from the beginning of the contract. Just because it was not done previously does not mean it was being done correctly.● Always backup records, regardless if they are electronic or hard copy.● Cut off ways to "game" the system before it can happen. Learn the lessons from other contractors' experiences.
Consequences / Benefits: Setting things up correctly in the beginning sets the entire team up for success and a platform to make improvements and appropriate changes down the line. By avoiding the appearance of wrong doing and having processes transparent and easy to audit, annual external and all internal audits can be completed in a timely fashion and reduce audit risk for the contractors. Reducing compliance and audit issues improves relations with the customer.
Implementation & Effectiveness:
APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

2.6 Procurement and Subcontracting

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Lessons Learned

Lesson: 2.6.1

Title: Have a Strategy for Determining Self-Performed Versus Subcontracted Work

LESSONS LEARNED SUMMARY:

The WCH contract had challenging socioeconomic goals, including requiring that at least 60% of field work be subcontracted, and 65% of the work subcontracted be awarded to small businesses. These goals required a clearly delineated plan that established what scopes of work should be subcontracted and, of that subcontracted work, what was suitable for small businesses.

DISCUSSION

Description:

Initially WCH subcontracted and also established small-business set-asides for as much of the subcontracted work as possible. Generally, with sufficient WCH oversight, this approach worked well. However, as scope had increasingly more difficult challenges, work presented some businesses with challenges beyond their capacities, introducing concerns on WCH's part regarding safe performance of work. In particular, experiences with high-risk work in the 300 Area and 618-10 Burial Ground reinforced WCH's commitment that each work scope be rigorously evaluated based on how best to ensure safe completion.

At that point in the contract, WCH instituted a formal process to determine when work was suitable for subcontracting, whether for large or small businesses. The appropriate project director (Field Remediation, D4, Waste Operations) in consultation with the Director, Environmental Safety, Health, and Quality, the Manager, Contracts and Procurement, and the Deputy Project Manager reviewed the proposed scope of potential construction subcontracts. Together, they made a determination of whether to self-perform, set the subcontract aside for small businesses, or solicit a subcontractor through an open solicitation, which may include large businesses. These determinations were made based on the following factors:

- Maximizing safe performance
- Minimizing risk-to workers and the environment-of both known and unpredicted hazards
- Maintaining integrity and standards of WCH's Integrated Work Control Program
- Ensuring availability of technical capability commensurate with complexity of the work scope
- Assuring essential coordination and engagement of key personnel in time-critical decisions
- Avoiding redundant levels of project and work plan reviews, or other constraints on safe, timely performance of work
- Assigning clear lines of responsibility and accountability
- Sustaining deliberate conduct of operations, safety standards, and WCH management expectations
- Ensuring availability of appropriate expertise, capability, and resources
- Meeting regulatory and customer (DOE-RL) commitments.

This evaluation process was only applied in the following four circumstances:

- a. A subcontract was being considered-whether for new work (e.g., 324 Building waste site remediation); or subsequent to expiration of a current subcontract
- b. Poor performance of a subcontractor warranted contract termination (i.e., Termination for other than Convenience)
- c. Conditions or risks on an existing subcontract change, resulting in the need to reconsider the scope of the subcontract, the approach to doing the work, or the expertise/experience/capability/resources/or equipment needed
- d. A subcontractor initiated an action that required a review and approval by WCH (e.g., transfer of an existing subcontract from one subcontractor to another).

Lessons Learned

As highlighted in the Closeout Office Avoidance Plan, this process also contributed to supporting timely closeout of the contract by providing for a) procurement files to be closed and archived, and b) minimizing the probability of open disputes, claims, or settlement actions extending well beyond the contract period of performance.

Consequences / Benefits:

As was intended, the instituting of a rigorous, multi-dimensional review of work scopes prior to award allowed for significant realignment between work being performed and work being subcontracted. As was the goal, safety remained the priority in all work, irrespective of whether self-performed or subcontracted, the number of open procurement files at the end of the period of performance was minimized, and essentially only one subcontractor claim was carried forward into the closeout office.

Implementation & Effectiveness:

A balance needs to be achieved between the socioeconomic goals in the contract and the risk associated with each component of the contract scope of work. Whereas sufficient value of work needs to be set aside for small businesses, that work should not represent a level of technical challenge or risk beyond that which the businesses can reasonably be expected to achieve given their experience to date and resources. Oversight should not be substituted for subcontractor capability.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 2.6.2

Title: Align Subcontract Types with Work Scope and Risks

LESSONS LEARNED SUMMARY:

Completion of the River Corridor Closure Project entailed more than 4,400 subcontracts—the vast majority of which (81%) were firm fixed-price subcontracts, which represent the least risk of unallowable costs owing to the subcontractor bearing the responsibility for the schedule as well as the labor and material costs. In all cases, the goal was to award subcontracts that aligned the contract type with minimizing risks and costs to achieve the work scope.

DISCUSSION

Description:

Over the course of the contract, WCH awarded both fixed-price and cost-reimbursement subcontracts. Driven by the nature of the scope of work and the associated risks, the contract type was selected based on who should bear the risks should there be costs in excess of contract values. The goal was to maintain a balance so as to share reasonable risk.

Overall, while the vast majority of WCH subcontracts were fixed-price subcontracts, significant dollars were subcontracted in cost plus, time and materials, and labor hour subcontracts. These cost-reimbursement subcontracts demanded more oversight, by both the subcontract technical representative and procurement, because the impetus must remain on delivering the scope for a reasonable cost and not to incur undue charges; this is particularly challenging since most construction subcontracts assured the subcontractor not only recovery of its costs, but also profit based on a percentage of the costs.

In some instances, the contract type was challenged during review either by the local DOE or Headquarters. In these instances, the onus was on WCH to demonstrate the value to the government. For instance, a sizable contract for operation of the Environmental Restoration Disposal Facility was designed as a time and materials subcontract. When questioned as to why this subcontract was not fixed price, documentation was provided that demonstrated the potential savings from having flexibility in staffing to accommodate significant adjustments in the volumes of waste to be received (savings that were, in fact, achieved over the course of the subcontract).

Issues did, however, occur because often multiple contract types would be interwoven with a subcontract--with many fixed-cost-type contracts incorporating cost plus components. This occurred because of a variety of reasons, including expanding scopes of subcontracts and some weaknesses in procurement controls, including inadequate monitoring of subcontracts and excessive use of exceptions to use of competition.

Consequences / Benefits:

Overall, the limited numbers of dollars of questioned costs resulting from subcontractors, as identified by both internal and independent auditors, demonstrates that the contracts were effectively overseen. In addition, the significant cost savings and schedule performance on the contract also validate that the subcontracts were well designed and allowed work to be completed in a safe and efficient manner.

Implementation & Effectiveness:

Using the correct contract type is critical in ensuring the appropriate degrees of risk are assumed by both the contractor and the subcontractor. Ensuring close coordination among the field personnel and procurement was key in both determining the subcontract type and the level of resource needed for an appropriate degree of oversight and assistance. Diligence in the overall administration of the subcontractor from inception through closeout is also critical.

Lessons Learned

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 2.6.3

Title: Maintain Current Procurement Files

LESSONS LEARNED SUMMARY:

With 2 years remaining in the River Corridor Closure Contract, several hundred subcontracts with completed work scopes remained open. The closure of many of these files was exacerbated by various issues:

- Files missing critical supporting documentation required significant research to locate the pieces.
- Procurement actions were complicated and required significant effort to review and understand the actions to ensure what pieces of supporting documentation were required.
- Supporting documentation including cost/price and summary and justification memoranda needed to be written.
- Files were originally administered by staff who no longer worked at WCH; turnover to remaining staff was hurried and incomplete.
- Procurement staffing was over-taxed.
- Contract type was changed midstream and not well documented.
- There were inconsistent practices among buyers.

Closure of these procurement files required significantly more resources than were available, particularly considering WCH management's goal of completing contract closeout within 6 months of the contract end date.

WCH management identified the need and created a procurement closeout subgroup dedicated to closing the legacy open/non-active files as well as providing additional necessary support to the normal procurement staff in managing and closing the active and ongoing procurements.

At the the end of calendar year 2016, less than 3 months past the contract end date, all but four subcontracts had been closed, and WCH expected to close those within the next month. This could not have been accomplished in this time frame without the closeout subgroup.

All of these issues lead to inefficiency, complications for turnover to other staff, and missing or hard-to-find information. This requires additional effort in locating the necessary documentation when turning over files and during closeout.

A secondary consequence occurs when the data and supporting documentation are not available during incurred cost audits. This leads to follow-on questions and additional rework to substantiate the actions. Without the supporting information, it is possible that findings of unallowable, sustained questioned costs are the outcome, whereas having had the appropriate data and documentation, the findings would have been otherwise.

DISCUSSION

Description:

Closure of procurement files required significant effort. It was discovered that many of the procurement files for subcontracts and purchase orders were incomplete and were missing files; there were undocumented actions; lack of proposals, quotes, and price evaluations; and in general many of the files were in disarray. Creation and utilization of a procurement closeout subgroup was the successful solution to closing the procurement files in an aggressive short time frame.

Although the Procurement department maintained a standardized file storage system and electronic share drives, they were not rigorously used by all staff for various reasons, including:

- Some procurement administrators were uncomfortable with navigating Windows Explorer, and saving files in the appropriate locations was daunting.

Lessons Learned

- Some procurement administrators decided to use different file storage methods they believed to be superior to the adopted system, while yet others largely used email folders for documentation storage.
- Some procurement actions were performed largely by the field projects and the files were saved on project share drives or in email and not forwarded to the procurement administrators.
- Training and meetings presenting the file storage system and management's expectations were conducted but were not received well or accepted by all staff.

All of these issues lead to inefficiency, complications for turnover to other staff, and missing or hard-to-find information. This requires additional effort in locating the necessary documentation when turning over files and during closeout.

A secondary consequence occurs when the data and supporting documentation are not available during incurred cost audits. This leads to follow-on questions and additional rework to substantiate the actions. Without the supporting information, it is possible that findings of unallowable, sustained questioned costs are the outcome whereas having had the appropriate data and documentation, the findings would have been otherwise.

Consequences / Benefits:

The formation and implementation of the procurement closeout subgroup was instrumental in being able to close a large prime contract in such a short time frame. However, the level of effort necessary could have been reduced had the procurement procedures been enforced more diligently, specifically with regards to documentation and the standardization of maintaining and timely closing of the procurement files. Good planning, implementation, and management of a file storage system would undoubtedly have decreased the level of effort expended in closing the procurement files for this project. Perhaps the closeout could have been completed sooner.

Implementation & Effectiveness:

Implementation requires a solid management endorsement and full commitment from and ownership by all functional groups. Regular reviews to ensure the effort maintains the appropriate level of support and progress.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 2.6.4
Title: Periodically Confirm the Flow-Down of Requirements to Subcontractors
<p>LESSONS LEARNED SUMMARY: During the course of the River Corridor Closure Contract, it was discovered that changes in subcontract requirements were not always disseminated to subcontractors.</p> <p>WCH evaluated the procedures and work practices, identified the issues, and then implemented programmatic changes and training to ensure timely flowdown of changes in requirements.</p>
<p>DISCUSSION</p> <p>Description: WCH conducted work in accordance with the DOE Integrated Safety Management System and its guiding principles. In summary, WCH planned the work and then worked the plan. Throughout the performance of work, the effectiveness was continuously evaluated and improvements implemented. Oftentimes the improvements included revisions to technical specifications, work packages, procedures, and guidelines. There were cases where it was later discovered that subcontractors were operating to obsolete requirement documents.</p> <p>The various requirement documents were “owned” by various functional groups and there were no commonly applied methods of disseminating these changes to the Procurement group, to the subcontract technical representatives (STRs), or the project personnel. Sometimes the lines of communication were not clearly delineated. This resulted in cases where subcontractors were not aware of changed requirements. Additionally, there were no methods of checking to ensure the latest versions of documents were being utilized.</p> <p>Maintaining lines of communication and establishing a method of verifying the latest versions of the documents were necessary. WCH also conducted a comprehensive management assessment of the STR program, which resulted in a far-reaching corrective action plan. As one element of that program, WCH emplaced an STR coordinator in the procurement functional group and instituted routine communications between Procurement and the various functional groups to notify and flow down changed requirements/ documents. The STR coordinator would notify the project support personnel and identify the projects to which flowdowns were necessary, and then issue the flowdowns with instructions and training.</p> <p>Following this, the STR coordinator would track and periodically review the subcontract exhibits and other documents to ensure the requirement documents were kept up to date.</p>
<p>Consequences / Benefits: Performing work with obsolete requirements documents could have a wide range of consequences. Implementation of the STR coordinator to identify and disseminate the latest requirement documents eliminates many unintended outcomes. The risk to both safety and performance is significant.</p>
<p>Implementation & Effectiveness: Implementation requires a solid management endorsement and full commitment from and ownership by all functional groups. Regular reviews to ensure the effort maintains the appropriate level of support and progress.</p>
<p>APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____</p>

Lessons Learned

Lesson: 2.6.5
Title: Use Staff Augmentation/Technical Services Subcontracting to Supplement Resources
LESSONS LEARNED SUMMARY: When planning building deactivation/interim storage of facilities that contain unique features (hot cells, reactors, high-level tanks, and gloveboxes), fully evaluate the existing systems/equipment/structures (cranes, ventilation, roofs, special tools, etc.) of the facility for demolition uses prior to deactivating or removing these systems/equipment/structures.
DISCUSSION Description: Staff augmentation and technical service subcontracts were necessary for the successful completion of the RCC contract. Continuation of previous existing subcontracts, in many cases, was required to maintain continuity, knowledge, and technical capability. Staff augmentation subcontracts (existing and new) needed to be established early and included multiple year pricing, and other options needed to be incorporated at initial award.
Consequences / Benefits: Using staff augmentation and technical service contracts maintains continuity and capability, as well as avoiding multiple/year-after-year renewals, bidding, delays, and subcontract formation and award costs.
Implementation & Effectiveness: Project and procurement personnel need to evaluate staff augmentation and technical support subcontracts at the time of prime contract award and decide if continuing is required and develop the best approach to continue the service/support. When issuing staff augmentation and technical support, subcontracts include out-year pricing and options as applicable.
APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 2.6.6
Title: Develop Customizable Subcontract Documents
LESSONS LEARNED SUMMARY: Develop commercial and technical subcontract documents that can be customized (graded approach) to match the scope of work.
DISCUSSION Description: WCH developed subcontract exhibits for commercial, quality, safety, environmental, and work control requirements that included a matrix to identify the applicable requirements based on the scope of the subcontract. The matrix was reviewed and approved by the applicable subject matter experts and if a deviation from the requirements was requested, approval by the functional manager for the subject area was required.
Consequences / Benefits: Eliminates unnecessary requirements resulting in reduced costs and streamlined contracts. Provides mechanism to avoid over/under-application of requirements.
Implementation & Effectiveness: Each functional organization shall responsible to develop and maintain the exhibit for the subject area. The functional groups then must provide training on how to apply the requirements based on the scope of the subcontract.
APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 2.6.7
Title: Provide Subcontract and Invoicing Training
<p>LESSONS LEARNED SUMMARY: Provide invoice review and approval training for subcontract technical representatives, administrative assistants, and procurement specialists.</p>
<p>DISCUSSION Description: Incurred cost audits of completed subcontracts resulted in numerous audit findings and questions requiring resolution at the end of the contract period of performance. Most of the personnel involved in the administration of the subcontracts including the invoice approval process had left the company, making resolution of the audit issues difficult. The breadth and depth of the incurred cost audits identified that robust review and approval of subcontract invoices must be performed by the subcontract technical representatives, administrative assistants, and procurement specialists in order to minimize the "after the fact" questioned costs. Due to the complexities of the federal regulations and audit practices, an in-depth training program should be developed and provided to subcontract administration personnel. In addition, when the award of a subcontract is made, an expectations/requirements meeting with the subcontractor concerning invoicing must also be performed.</p> <p>A very successful activity was initiated for internal training by one of the senior procurement professionals. Two levels of certification were available to procurement, finance, and project control personnel. The training provided intensive training (with rigorous testing) regarding "The Formation of Subcontracts," composed of modules on "Introduction to Contracts," "Solicitation Preparations," and "Evaluation and Award."</p>
<p>Consequences / Benefits: Raising the expertise of the staff had direct benefits in the areas of minimizing unallowable costs, achieving compliance with Department of Energy Acquisition Regulations (DEAR) and Federal Acquisition Regulations (FAR). The training was also a contributor to the subcontractor allowable costs audits, which--although pointing out weaknesses in procurement controls--have questioned costs that were 0.14% of the cumulative value of subcontracts awarded over the course of the WCH contract.</p>
<p>Implementation & Effectiveness: The procurement department needs to develop and provide subcontract administration training with a specific emphasis on invoicing and incurred cost compliance. This training should directly address any weaknesses as had been identified by self-assessments and independent audits.</p>
<p>APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____</p>

Lessons Learned

Lesson: 2.6.8

Title: Do Not Allow Work Urgency to Override Process and Controls

LESSONS LEARNED SUMMARY:

As was reported in any number of subcontractor allowable cost audits, many of the controls established in procurement had been overridden given the urgency and volume of activity. Although there was no specifically determined additional cost to the government, failing to maintain full and complete compliance with the administrative controls might have increased the risk of unallowable costs. The processes used and the staffing available have to be sufficient to ensure that, even when work volumes or high-priority activities need to be subcontracted, all controls can be suitably maintained.

DISCUSSION

Description:

Audits conducted by WCH Internal Audit and independent audit firms identified procurement-related control issues that could have resulted in a material misstatement of cost:

- Inadequate documentation of the award justification
- Cost growth without documented justification
- Inadequate monitoring of subcontracts
- Missing key documents in contract file
- Failure to incorporate contract modifications on a timely basis
- Field personnel interference in procurement process
- Excessive use of exceptions to use of competition
- Long-term labor hour contracts in lieu of hiring
- Mixture of pay item types in a single contract
- Clear understanding of what costs are covered in subcontractor rates
- Timely completion of lease versus buy analysis.

These weaknesses were likely the consequence of several business decisions and contractual expectations: routine expansion of scope and contract modifications; the need for timely response to changed and unanticipated conditions; resequencing of work necessitated by funding reductions that changed subcontract schedules and scope; the need to retain qualified subcontractors; and ensuring best price options (e.g., minimizing mobilizations and demobilizations).

Although no actual harm was determined, these weaknesses were indicative of several influencing factors including:

- Lack of sufficient procurement staffing
- Lack of sufficient procurement management oversight
- Inadequate coordination between project and procurement staff
- Ineffective management of subcontract technical representatives (STRs)
- Assigning too many subcontractors to a single STR
- Continual changing site requirements, disrupting and compressing supply chain timelines
- Perception by the field that procurement processes placed a drag on schedule.

Whereas many actions were taken during the course of the contract to address these influencing factors, the reports indicated that significantly more would have needed to be done and at an earlier stage in the project for the weaknesses to have been eliminated or mitigated.

Consequences / Benefits:

The possibility of weaknesses in controls resulting in unallowable costs greatly complicated the process of arriving at a settlement for all subcontractor allowable costs. WCH was required to adjust the questioned costs for some subcontracts to allow for a factor associated with the weaknesses.

Lessons Learned

Implementation & Effectiveness:

Many of the weaknesses were identified too late in the contract to allow for any adjustments. However, had time been available, the issues of sufficient staffing--both in the procurement and STR functions--would have been addressed, along with more detailed processes to ensure the levels of cooperation and communication were not subject to changes in work volumes or the number of priority procurements and subcontracts.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

2.7 Internal Audit

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Lessons Learned

Lesson: 2.7.1
Title: Agree in Advance to Audit Expectations with the Customer
<p>LESSONS LEARNED SUMMARY: Internal auditing is a basic expectation for prime contracts. There are, however, various standards that can be applied, and there may be different expectations about the extent of documentation in the working papers and other auditing considerations.</p>
<p>DISCUSSION Description: For the better share of the WCH contract, WCH maintained only a part-time person to fulfill the Internal Audit (IA) function; this individual conducted, on average, nine audits per year--although only one audit (incurred cost) was stipulated in the WCH contract. After several years, DOE made it known that it did not consider the internal audits sufficiently robust. In particular, the client questioned the auditing standards used and whether the audits met the professional care required by IIA Standard 1220, Due Professional Care (GAGAS 3.6). The suggestion was that audits were being rushed so as to allow WCH to earn more fee. Addressing the issues required several actions, including bringing in a senior corporate auditing manager, establishing formal policies for the IA function, and reassigning the IA function so that it reported directly to the Project Manager; previously the IA Manager reported to the General Counsel.</p> <p>Another issue concerning the auditing expectations involved which subcontractors were expected to be conducting their own internal audits and incurred cost audits. Given the heavy reliance on small businesses, most of which had little expertise or resource as regards to auditing, the standard contract documents did not stipulate the requirement for conducting these audits. However, as the contract progressed, and particularly when the contract approached closeout, this lack of subcontractor-conducted allowable cost audits became an issue of contention.</p> <p>Lastly, in the final years of the contract when WCH turned its auditing focus to completing work on subcontractor allowable cost audits, DOE continued to challenge the breadth of the annual auditing plan. Several meetings between WCH IA and DOE Finance were held on the subject.</p> <p>In all instances, much debate and problems could have been avoided had there been early engagement between WCH and with the DOE Contracting Officer and with DOE's Finance and oversight organizations.</p> <p>Consequences / Benefits: In addition to the considerable resource expended in resolving these issues, these matters placed considerable risk on the contractor. As DOE saw it, the auditing issues created some likelihood that the government had been erroneously charged for services and that these charges had gone undetected because of the weaknesses in the auditing program. As such, the DOE required some "consideration" as part of an ultimate settlement to resolve the issues.</p> <p>Implementation & Effectiveness: At the onset of the contract, there should be meetings to discuss the details of the IA program. It is not sufficient to assume that submission of an annual audit plan will provide full agreement on the program, the standards, the documentation, and the scope. Regular engagement needs to be maintained as the contract progresses, including requesting formal approvals of the audit plan and approval of each completed audit.</p>
<p>APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____</p>

Lessons Learned

Lesson: 2.7.2

Title: Stay Up-To-Date on Subcontractor Allowable Cost Audits

LESSONS LEARNED SUMMARY:

Allowable cost audits are expected to be conducted on subcontracts in excess of \$700k. In the course of a contract, it is easy to fall behind on conducting these audits; doing so creates considerable risks for the contractor, including availability of needed documentation, availability of personnel acquainted with the subcontract (e.g., subcontract technical representatives), and, even, contracts being unauditible due to the amount of time that has transpired or a subcontractor having gone out of business.

DISCUSSION

Description:

Over the course of the contract, WCH maintained a careful and disciplined approach to meeting its contractually-established socioeconomic obligations. This action entailed ensuring that no more than 40% of the overall work scope was self-performed, and at least 65% of subcontracted dollars were assigned to small businesses.

As of the completion of the contract, the cumulative self-performed work represented 28.7% based on the Actual Cost of Work Performed (ACWP), and 88.7% (approximately \$1.122B) of subcontracted dollars had been committed to small businesses. Overall, the subcontracted volume of work entailed more than 4,400 subcontracts—the vast majority of which (81%) were firm-fixed-price subcontracts, which generally represent the least risk of unallowable costs owing to the subcontractor bearing the responsibility for the schedule as well as the labor and material costs.

Given the large number of subcontracts and the varying degrees of risk of unallowable costs being charged to the government associated with the different types of subcontracts awarded, WCH—working with several of the other Hanford prime contractors—developed a risk-based approach to identifying the subcontractors to be audited. Once subcontracts were identified for review, the WCH Internal Audit (IA) manager used the guidance provided in the General Accounting Office “Yellow Book,” the “Red Book” published by the Institute of Internal Auditors (IIA), and requirements published by the American Institute of Certified Public Accountants (AICPA) to decide whether to proceed with an audit or an assessment—recognizing that the assessment could trigger a fuller audit if discrepancies or unallowable costs were identified.

A review of all subcontracts selected for audit revealed that approximately two-thirds of the subcontracts awarded could not be audited because final payment had been made more than 3 years prior to the start of the IA audits. It was also determined in the course of IA evaluations of procurement files that subcontracts often involved more than one type of contract element.

These complex subcontract arrangements as determined by IA were the consequence of several business decisions and contractual expectations: routine expansion of scope and contract modifications; the need for timely response to changed and unanticipated conditions; resequencing of work necessitated by funding reductions that changed subcontract schedules and scope; the need to retain qualified subcontractors; and ensuring best price options (e.g., minimizing mobilizations and demobilizations).

Given these factors, the IA Subcontractor Allowable Cost Audit Plan was divided into two components: 1) auditing of those subcontracts by IA that had been identified in the risk evaluation as warranting audits based on their potential for unallowable costs, and 2) an assessment by three independent audit firms of potential questioned costs and overall risk ratings for those subcontracts that had been selected in the IA risk assessment but were not available to be audited. These assessments were based on complete procurement packages that WCH supplied to the audit teams containing contracts, amendments, change orders, and invoices. In total, approximately \$520 million in subcontracts was audited, with another \$292 million in

Lessons Learned

subcontracts assessed by the independent audit firms.

Based on these audits and assessments, a settlement offer was made and a settlement reached.

Consequences / Benefits:

Having fallen behind in the auditing of subcontractors required considerable negotiation--both in reaching agreement on a suitable methodology to discern potential questioned costs on unauditible subcontracts and in the final settlement agreement. The increased risk to the government of unallowable costs was largely borne by WCH, because the methodology approximated an audit but could not actually gain access to the books for the \$292 million in subcontracts that was assessed.

The settlement process also affected closeout of the independent incurred cost audits conducted by the Defense Contract Audit Agency and KPMG of WCH. Because the questioned costs for subcontracts could not be resolved until the settlement process was completed, closing out the audits remained one of the longest lingering chores to be completed by the closeout office.

Implementation & Effectiveness:

Efforts and resources have to be devoted to keeping up with the audits of subcontractors. In particular, subcontracts should not be closed (i.e., final payments made) until these audits are conducted; otherwise any determined questioned costs likely become unrecoverable from the contractor, and, hence, unallowable costs to be paid by the client.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) All FAR-based contractors

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2.8 General

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Lessons Learned

Lesson: 2.8.1
Title: Maintain Office Housekeeping
LESSONS LEARNED SUMMARY: A clean office space is crucial to employee productivity and efficiency. In addition, unobstructed work areas provide a safe environment for workers to conduct business. All of these attributes have a positive impact on scope, schedule, and budget.
DISCUSSION Description: Routine office housecleaning allowed personnel the opportunity to turn in records, electronics, and office supplies that were no longer being used. This event was announced by email or company notifications that were sent out to employees well in advance of the event. The announcement provided the activity date, and the location of the collection stations. Supported by the company, managers allowed employees ample time to clean their areas. Once employees were satisfied that they had addressed all housecleaning issues in their work space, they returned to work. Excess items were restocked in their proper areas, completed records were sent to Document Control or Records Management for processing, and reference material that was no longer needed was collected in recycle bins.
Consequences / Benefits: Eliminating clutter in an office ensures a safe work environment, and increases employee efficiency and productivity. Reducing the amount of paper (copies of reference material no longer needed) throughout the life of the contract eliminates the huge effort toward the end of the project when minimal resources are available. Housekeeping reduces workload, redundancy, paper, and operating costs. A clean office space reduces employee stress, saves time, and promotes a professional image.
Implementation & Effectiveness: Emails were sent out in advance of housecleaning days. This information contained the location of collection stations, recycle bins, and contact numbers for assistance from Information Technology, Records Management, and Office Services. Stations were set up throughout the building to collect electronics, office material, or books that were no longer used. Extra recycle bins were also strategically placed throughout the building. The day of cleanup, employees were allowed time to restructure and clean their work space and surrounding common areas. The results of this effort were increased employee morale, a decrease in safety hazards, and, in a few cases, the discovery of records that had been buried under office clutter or forgotten, and reduction of reference material that was no longer needed.
APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

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3 Human Resources

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3.1 Putting the Program In Place

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Lessons Learned

Lesson: 3.1.1
Title: Develop a Communications Plan at the Onset of the Project
LESSONS LEARNED SUMMARY: Create a robust communications plan (employee and public relations) in advance of the start of the contract.
DISCUSSION Description: Communications are the cornerstone of a trust-based organization. After a pre-determination of the desired culture, WCH developed a communications plan that reinforced this culture and over-communicated, especially in the early stages of the project. A line of sight between what employees did and the mission of the company was developed. Regular recognition was included for all projects and functions. Written communication, social media, workplace meetings and events, and face-to-face interactions were also included. WCH was a friend to the community, providing frequent information on the status of the work.
Consequences / Benefits: A proper communications plan, when implemented, shares the success strategy with all employees and the community, sets expectations, recognizes the good from the previous contract and explains what will be different, as well as sharing the status of the overall project and in the specific areas in which each employee works.
Implementation & Effectiveness: To the greatest extent possible, try to maintain control of public relations activities and communication. Success will be measured via check-ins with employees and community news media. Exit interviews with employees will provide an after-the-fact idea on effectiveness. Face-to-face check-ins can also result in ideas for additional communication topics and mediums.
APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 3.1.2

Title: Use Early Team Building to Increase Cooperation and Productivity

LESSONS LEARNED SUMMARY:

Conduct team building during the early stages of a major contract, particularly if the team is composed of multiple company and incumbent personnel.

DISCUSSION

Description:

As with many contracts, WCH assumed scope that was previously contracted to several other prime contractors. Merging personnel, policies, and cultures required a concerted, protracted effort. WCH experienced initial conflicts between organizations concerning policies, requirements, and various project objectives. Outside consultation was initially brought in to help resolve these differences, with limited success. The senior management leadership initiated team building meetings and planning sessions that significantly reduced these conflicts. These meetings continued for a significant period of time until it was evident that there was a one-team mentality.

Consequences / Benefits:

Establish working relationships and develop a cohesive organization. Develop an understanding of each team's goals, objectives, restrictions, and drivers. Without this effort, issues--even if not immediately evident--would likely have interfered with getting work completed safely and efficiently.

Implementation & Effectiveness:

Implementation requires a senior management sponsor and commitment. Team building needs to be initiated at transition and continued throughout the contract performance period. Several feedback mechanisms need to be put into place to allow a voice to all personnel. Also, line management needs to become actively engaged--both in communication to workers and raising issues to senior management for action.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 3.1.3
Title: Promote Organization Development
LESSONS LEARNED SUMMARY: Conduct team building during the early stages of a major project, especially if the team is composed of staff from multiple companies and/or both incumbent and non-incumbent staff.
DISCUSSION Description: WCH did not do this initially on the project, but did undertake it later. Part of the process needs to include a shared understanding of the team's goals, objectives, restrictions, and drivers. If a strategic plan (also recommended) is prepared in advance of the award, this is the perfect time to share the highlights of that plan along with the purpose for how the plan was built.
Consequences / Benefits: The earlier this process is undertaken, the easier the transition to a cohesive team. Often, when a new team is formed, people each have their own understanding of how they plan to operate in their part of the team. This may or may not be consistent with the plans of the senior management. In addition, these ideas are often based on things that worked for them in a previous organization. Starting with a common understanding of the work objectives and the standards by which they will be done is a good way to get everyone on the same page.
Implementation & Effectiveness: Early identification of an organization development consultant to lead the team-building sessions is the best way to start. In concert with key members of the senior management team, develop a workable agenda. Success should be determined by interviews with participating members of the organization after the team building and senior management assessment of whether work is progressing as envisioned. There should also be ongoing accountability for effective implementation.
APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 3.1.4

Title: Make Effective Use of Incentive Programs

LESSONS LEARNED SUMMARY:

The WCH Incentive Compensation Program was successful in supporting retention of employees. Some changes to the eligibility requirements might have made it even more successful. Changes in the provisions and/or administration also might have made program components easier to understand.

DISCUSSION

Description:

At the onset of the project, WCH established an incentive program that included all personnel, represented and non-represented. The incentive program included both an annual incentive based on cost and schedule performance by the project and a share in the schedule incentive established for WCH in the contract tied to timely completion of the majority of the work scope. In both components, safety remained a prime factor: any significant safety issue could reduce or, even, eliminate the incentive.

Initially, DOE agreed to cover the first 4% of the cost of the employee cost of the program and included the requirement for an annual request and approval. Later in the project, approval of the program was denied during a time of salary freezes. This was quite disappointing to employees. Using fee earned on the project, for the next two years subsequent to DOE's disapproval of incentive allowability, the parent companies paid non-represented employees a percentage of what they would have received in the program (75% the first year, 45% the second). HAMTC-represented employees continued to receive the annual awards as an allowable cost because the incentive had been established in the Collective Bargaining Agreement (CBA).

Clearly the situation would have been different had there been a contractual basis established (rather than simply issuing a request for approval letter to DOE on an annual basis.) Therefore, we recommend that negotiated language include the same funding requirements as for non-represented represented. (

Regarding the schedule incentive, the contract stipulated that a bonus would be earned if essentially all work (approximately \$1 billion) was completed by a certain date. Early in the contract, WCH worked out a formula by which employees would share approximately 50% of the incentive. Each individual's share was figured based on the total number of months the individual had worked by the time the award was invoiced, with the requirement that the employee had not quit the company in advance of that date. Therefore, even personnel who had retired years earlier were still entitled to a share of the incentive.

Together, the annual incentive and the schedule incentive gave everyone a stake in making the project successful--both in being safe and getting work done efficiently.

See also Lessons Learned 1.11, Establish an Incentive Fee Pool.

Consequences / Benefits:

Retention of required talent, especially on a limited life project, is a definite positive outcome. Making the recommended changes will further improve the retention of staff. In addition, as part of an overall culture of valuing employees, this is a good thing to include. Any such program should be included as part of the strategy for retention, and tight eligibility requirements may improve the effectiveness of this.

Once employees understood that bonuses were based on the annual performance of the project, they were very engaged in making good business decisions that contributed to project success.

Implementation & Effectiveness:

Determine the type of incentive program appropriate for the project in question. Build it into the overall project strategy and into the proposal, if appropriate. Consider how it will be communicated to affected

Lessons Learned

employees regularly along with the metrics on project performance. Such metrics will help determine if the program is being successful. Attrition statistics can also help to evaluate effectiveness of incentives. However, remember most personnel decisions to stay or go are based on many factors besides money. In fact, the bonuses will be most effective when combined with an effective overall project delivery strategy, well communicated, and a culture of honesty and employee engagement. The program should be well communicated with a good line of sight between the work being done and the incentive award.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 3.1.5
Title: Adapt to Seniority Requirements
<p>LESSONS LEARNED SUMMARY: Although there are several prime contractors at Hanford, the site maintains a site-wide seniority system for represented personnel. The system introduces several challenges that need to be anticipated and addressed, particularly where changes in staffing in any one contractor can, in turn, cause what is known as “bump and roll”--in which personnel from one contract can displace less senior members of the union at another contractor.</p>
<p>DISCUSSION Description: Because WCH generally had less senior people, large layoffs from another contractor would often affect a significant portion of the WCH workforce. In one instance, the entire D&D crew responsible for the decommissioning and demolition of facilities was displaced. The consequence include significant safety, cost, and schedule implications. With the exception of certain safety policies and practices, work practices differ from one site contractor to another--requiring retraining of newly assigned personnel and additional management oversight during the assimilation process.</p> <p>Therefore, approaches, such as arranging for training in blocks of classes (up to 6 hours in a day) rather than distributed across many days and times, were needed to minimize the disruption to work. Although efforts were made with the unions to establish certain boundaries to preclude the full brunt of such bump and rolls, none were successful because they were inconsistent with the Collective Bargaining Agreement.</p> <p>New approaches needed to be developed to handle various administrative details, such as processing people in and out of the project in a timely fashion. The overall goal became putting in place the necessary procedures and practices to allow for an expedited response when such staffing anomalies occurred--recognizing that they were likely to become routine events.</p>
<p>Consequences / Benefits: The site-wide seniority system resulted in a loss of productivity, increased training costs and time, as well as increased potential for error or safety issues as large groups of employees had to become familiar with the work and culture of WCH. A disciplined approach to the process allowed the overall risks and consequences to be greatly mitigated.</p>
<p>Implementation & Effectiveness: Although pre-planning and increased oversight helped minimize the adverse impacts of the bump and rolls, a long-term strategy would have been more beneficial for all Hanford prime contractors. One option for addressing this situation is to try to collaborate with HAMTC on a project-specific resolution if an answer can be defined that does not directly challenge the site's long-standing commitment to site-wide seniority.</p> <p>The other option is to be very knowledgeable of the current place of all project employees on the seniority list and have a plan developed for how to address these situations before they occur. One option is to hire and train new employees before the old ones are released (double cost for a period). This approach, to a limited degree, was applied, but doubling the number of operational personnel costs for more than a very limited period of time is not a very efficient answer and is directly in contradiction to a contract in which cost savings is an incentive.</p>
<p>APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____</p>

Lessons Learned

Lesson: 3.1.6

Title: Foster Strong Labor-Management Relations

LESSONS LEARNED SUMMARY:

Open and regular communication with the labor unions and represented employees is critical. To the degree reasonable, management needs to keep engaged with the labor unions and provide routine interfaces to avoid allowing issues to fester or go unresolved.

DISCUSSION

Description:

Regular meetings between company senior management and the HAMTC leadership provided opportunities to discuss issues or concerns early and achieve resolution prior to them leading to grievances or other problems. At the onset of the project, WCH initiated monthly meetings at the Labor Temple that included the stewards of all unions represented on the project along with the WCH project manager and his/her immediate staff. At the beginning, some of these meetings were somewhat contentious, but as union personnel became convinced that the management intended to work through the issues, the meetings became more amicable and more productive.

Similarly, engaging the represented employees in the field was a part of the WCH culture. Work planning and execution included the input of employees and regular requests from management for suggestions and feedback. Stop works were taken seriously with a genuine interest in understanding the concern of the employee and their input to resolve it.

Consequences / Benefits:

The meetings improved trust and collaboration between the company and HAMTC and, as a result, trust of management improved in the field. There were also fewer filed grievances and arbitrations. There was also a good working relationship when it came, every 3 years, to negotiating the Collective Bargaining Agreement.

Discussions and involvement of represented employees in the field was paramount to creating trust. Open communication that included the recommendations of employees led to a sense of teamwork and collaboration and often resulted in more creative solutions to unexpected anomalies.

Implementation & Effectiveness:

Communications and action with HAMTC should be built in to the overall strategy prior to the start of the project. Regular monthly meetings with a set agenda are required in order to discuss project status, any actions or concerns that have arisen, staffing or de-staffing status, etc. Having essentially all the members of the senior staff in attendance was key to providing for immediate resolution of many issues.

Monitoring of grievances and arbitrations will help to determine whether the meetings with HAMTC and the communication with represented employees are being successful. Employee feedback tools, if used, (e.g., exit interviews, surveys) can also help gauge success in this area.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

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3.2 Approaching the End of the Project

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Lessons Learned

Lesson: 3.2.1

Title: Provide Individualized Plans for Personnel (People Plan)

LESSONS LEARNED SUMMARY:

Every project entails completing scopes of work--whether all work is completed by a single contractor or (as with management and operations [M&O] contracts), or a series of successive contractors participate in the completion of the scope of work. In all cases, personnel are always aware of and can become concerned by not having a clearly defined personal plan. In the case of WCH, this plan was composed of three key components: 1) what are my developmental and advancement opportunities, 2) when can I expect to be released from the project, and 3) how can WCH assist me in my plans or intentions post-release from WCH.

DISCUSSION

Description:

As discussed in other Lessons Learned, WCH provided numerous developmental opportunities for development and advancement, established end of assignment dates for every individual, and also provided closure coaches to assist in helping individuals prepare for their goals post release from WCH.

These three components were part of a larger People Plan that became one of the central hallmarks of the project. More than 2 years in advance of completing the contract period of performance, WCH management made a commitment to assist every individual to meet their goals after release from WCH. Meetings were held with every non-represented employee to find out what their goal was and to help define how best to assist them in that goal. Management, in concert with the closure coaches, would provide the needed assistance, complemented by routine meetings of Human Resources (HR) and the senior staff to discuss means to improve the support capabilities and to assess progress in assisting people as they neared their end of assignment dates. Specific tools used in assisting those individuals seeking employment included communications to regional corporations identifying the types of experience and disciplines becoming available, and, in some instances, professional profiles that were highlighted at corporate meetings. In addition, as a reflection of the positive working relationship among the parent companies, it was agreed that if an affiliate of one of the parent companies was unsuccessful within that company of securing a new position, the other parent companies would be approached to see if either of them had a suitable assignment for the individual.

Moreover, the approach was taken to celebrate the successes and the individuals' accomplishments and contributions. As individuals neared their end of assignment dates, there were breakfasts held with the senior management to thank them individually for their service. A newsletter was issued periodically that listed the names of people who were scheduled to leave in the immediate future, and there were articles describing unique success stories--which included not only those individuals who had secured new assignments but also stories of individuals who were retiring or, in some cases, establishing their own businesses. A summary metric was also developed that indicated the number of non-represented personnel who were interested in working past their release from WCH and the number of persons actually placed (whether through WCH or their own efforts). As of the completion of the contract, 95% (425 of 447) of those non-represented personnel who wanted another job after leaving the River Corridor Closure Project were placed.

Although support for represented personnel was somewhat restricted owing to the placement of any released workers being administered consistent with the Collective Bargaining Agreement, WCH did provide support as requested for represented personnel. Not only were the represented personnel welcome to attend any of the classes offered by the closure coaches, they could also take advantage of closure coach support. In addition, to allow personnel to do their individual planning, at every monthly labor meeting between WCH and the union stewards, a detailed table was provided indicating all the planned reductions over the next 6-month period for each labor category.

Lessons Learned

Consequences / Benefits:

Retaining personnel is largely a function of whether they feel that their personal interests are being attended to and that the company has a sincere interest in their opportunities and development. These considerations are even more significant when, as in the case of WCH, the contract--or the specific activity in which they are engaged--will be ending in the not-too-distant future. Without an honest and sustained program that provides for individual plans, personnel will be more likely to be looking elsewhere for opportunity.

Implementation & Effectiveness:

The effectiveness of personal-based planning requires a commitment from not only HR, but from the entire management chain. Support activities need to be visible and substantive, with communications that allow individuals to see clearly how the program meets their individual needs.

Gaging success will be evident from the types of employee feedback received. Satisfaction with the company and their management is critical. Retention and placement statistics should be used to complement the feedback.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) FAR-based contractors

Lessons Learned

Lesson: 3.2.2

Title: Establish a "People Plan" to Support Retention and Provide For Personnel Placement

LESSONS LEARNED SUMMARY:

Proving a foundation that supports the project's goals of retaining personnel while also providing personnel with the support they need as a contract comes to as close requires a comprehensive and robust "People Plan."

DISCUSSION

Description:

Although contacts were made with Human Resources (HR) and management personnel who had worked at other DOE and Department of Defense sites that have been closed (e.g., Rocky Flats, Mound, Umatilla), experiences there differed appreciably from the WCH circumstances (e.g., the duration of the closure process, the scale, the phasing.) This limited foundation to build upon necessitated that HR develop a unique and unprecedented program that would ensure the quality of individualized people planning that would support both the individual and the project.

As a first step, a team was formed to begin reviewing all of the business practices that would impact people as the project began the process of completing work and closing. The idea was to identify the closure approach for each activity. The final approach had to be geared at:

1. Supporting the safe, cost-effective completion of the mission
2. Retaining the necessary talent until the right time
3. Assisting employees in moving to the next phase of their career or life.

Each approach was evaluated against the company's core values of safety, quality, and performance. The business strategies used as a filter for each approach were, in order of importance, savings, retention, and placement. WCH also considered the drivers for each approach—was it required, a commitment WCH had made to employees, or simply a good business practice? After the process was determined, WCH developed approaches in the areas of staffing, retention, reduction of force, critical work/knowledge retention, and communications.

Following completion and approval of the plan, efforts began to communicate with managers and all employees. Meetings were held with managers and then separately with employees to discuss the workforce transition process. Since this was a closure project, the first discussion was on the notification process for employees as work scope was finished.

Employees were given 3 months advance written notice (known as the "head's up" period) of the 3-month organizational release window (ORW) during which their end of assignment (EOA) was expected to occur. Within the ORW, the employees received a 2-week notice letter in advance of their EOA. This meant that most employees were aware of their EOA dates about 6 months in advance. In addition, the dates could and often did move further out. Specific rules around staying until the ORW period applied, affecting the employee's eligibility for an end-of-contract bonus.

The company also committed to employees that each manager would have a "horizon" conversation with each employee. This conversation provided information to the employee estimating the EOA timeline for that employee. Based on the schedule, the manager would advise that the person's EOA date appeared to be coming soon (this year), a year or more away, or so far out on the horizon that he/she could not put an actual time frame on it. These conversations were for the purpose of 1) keeping the employee informed; 2) offering company support for future placement, if desired; 3) discussing things that could happen to cause dates to change; and 4) encouraging the employee to stay focused, safe, and sharp. The manager and employee

Lessons Learned

ended the conversation by agreeing to keep one another informed as changes occurred or if the employee located another opportunity that might cause him/her to leave the project early.

During the closure process, employees were moved into new roles as work scope ended and organizations collapsed. This resulted in opportunities for employees to develop resume-able skills that would have taken much longer to acquire on a different type job.

In addition to the plan itself, HR took initiative to create the needed infrastructure to implement and support the plan: a) they realigned the HR organization--establishing a closure coaching department focused exclusively on working one-on-one with personnel as their release dates approached; b) created a five-module personnel development course (detailing how to develop profiles, network, interview, and even negotiate salaries); c) established a presence at the local job service center to provide WCH employees off-hour access; d) brought in experts to train managers on helping employees with the transition; e) developed the procedure for assessing potential impacts of releases to minimize safety and business risks; f) gained approval from DOE-RL that adverse impact reports would not be required prior to each quarterly release period; g) created a website with offsite access and other internal communication tools; h) developed tools for use externally (as in health physics technician sessions) to advertise personnel and expertise becoming available; and i) established routine sessions among the WCH project manager, the senior leadership team, and personnel being released to thank them personally for their contributions to the project.

Consequences / Benefits:

Retaining personnel is largely a function of whether they feel that their personal interests are being attended to and that the company has a sincere interest in their opportunities and development. These considerations are even more significant when, as in the case of WCH, the contract--or the specific activity in which they are engaged, will be ending in the not-too-distant future. Without an honest and sustained program that provides for individual plans, personnel will be more likely to be looking elsewhere for opportunity.

Implementation & Effectiveness:

The effectiveness of personal-based planning requires a commitment from not only HR, but from the entire management chain. Support activities need to be visible and substantive, with communications that allow individuals to see clearly how the program meets their individual needs.

Gaging success will be evident from the types of employee feedback received. Satisfaction with the company and their management is critical. Retention and placement statistics should be used to complement the feedback.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 3.2.3
Title: Establish a Strong and Visible Program for People Development
<p>LESSONS LEARNED SUMMARY: Creating tangible opportunities for development of people is a critical component of an effective retention strategy. Development activities can be both internal and external to the project. In some cases, people who worked for WCH were provided development opportunities at other parent locations; conversely, personnel from other parent locations gaining experience by working on the WCH project. This latter situation was especially valuable as the project began to close and vacancies could no longer attract new permanent employees; in these instances, what represented a short-term developmental assignment not only helped strengthen the candidate when returning to his/her work home, it also represented an effective means to fill short-term needs at WCH.</p>
<p>DISCUSSION Description: As WCH sought to keep the project fully staffed during the closure process, several different mechanisms were developed for accomplishing that goal all the while giving participating staff the opportunity to develop skills that they might not otherwise have been able to obtain as quickly or as early in their career. Examples of this include the following:</p> <p>WCH staff developing on the WCH project - As work completed, organizations within WCH were collapsed and certain positions were combined to create full-time work as people left and certain, but not all, activities within a position ended. As this occurred, remaining employees were often given the opportunity to take over some responsibilities that they might never have done or that it might have taken much longer to have the opportunity to do on a longer term contract. This created "resume-able" experience for the future.</p> <p>WCH staff developing on a parent company contract elsewhere - When WCH staff positions dropped to less than full time but were still expected to be needed, some of these staff were offered to other parent company locations on a part-time basis. This contributed to their development and also assisted in potentially identifying future positions for the person.</p> <p>Parent company staff working part-time on the WCH project - One of the big advantages of having other parent company affiliates locally was that WCH could obtain a person to support them when a resource was lost that was still needed for a while. In some cases, WCH employees found positions at another local parent affiliate and we were able to buy the same employee back on a short-term basis to help complete defined scopes of work.</p>
<p>Consequences / Benefits: The major benefit to the project was that WCH found several unconventional ways to get work done and to give staff the opportunity to learn new skills at the same time. Obviously, this was also a benefit to the employee, since he/she got an early opportunity to learn new skills and often, as a result, to find a new position with that parent affiliate in the process.</p>
<p>Implementation & Effectiveness: Building and tracking against a Staffing Plan is a good place to start. However, true implementation happens more often when there are unexpected staff departures. Therefore, building a good relationship and understanding of this process with parent company affiliates and getting their agreement to participate was the thing that was most helpful to WCH. The idea was discussed with WCH affiliates far in advance of closure, and gained their support for the idea. As opportunities presented themselves, WCH discussed options and worked the details with the affiliate. Because there is mutual interest in the success of all of these projects, WCH was generally able to find a workable solution. Effectiveness of the process is determined by placement statistics as well as work completion successes. In the case of WCH, 95% of the people wanting other positions were placed, and most of these were with parent company affiliates.</p>

Lessons Learned

In addition, WCH staff were sought after by other companies for their expertise and work on such a successful project.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) Corporate affiliates

Lessons Learned

Lesson: 3.2.4

Title: Appoint Closure Coaches to Assist with Outplacement

LESSONS LEARNED SUMMARY:

WCH implemented a plan to mitigate job losses on the closure contract by setting up closure coaches to support outplacement.

DISCUSSION

Description:

Closure coaches were Human Resources personnel assigned to assist employees in their job search as their end of assignment approached. When an employee received his/her organizational release window (ORW) notice, they were provided with the services of a closure coach. This coach's job was to help the employee transition to whatever they wanted to come next in their life or career. In some cases, it might be preparing for retirement. In other cases, it was updating a resume, networking to find a job, or preparing for an interview. The coach knew the interests of the employee and helped him/her develop the correct strategies to meet their goal.

Among the activities supported by the closure coaches were the following:

- A college fair was held where colleges were brought in to talk about the kind of classes they offered and the details of tuition reimbursement programs for employees interested in continuing their education;
- "Meet the parent" sessions were held with representatives of the three parent companies;
- Getting ready to retire workshops explaining financial planning, the pension plan, the 401k program, and social security benefits;
- Collaboration with the Columbia Basin WorkSource to offer job search assistance, including workshops on how to start a small business;
- Implementation of a workforce transition website where employees could upload a resume, complete their profile, search employment opportunities, and learn about development options and upcoming events.

In addition, the closure coaches developed and offered a series of development courses:

- **Who Are You and Where Are You Going?:** A session on understanding your values, what you wanted to do next, and how you build the foundation to make it happen;
- **How to Build a Portfolio:** Creating portfolios to plan, track, and document past experiences that demonstrated their growth and expertise for use in preparing for a job interview;
- **Networking:** What networking is, how to do it, and how to identify your network;
- **Building a Job Search Strategy:** Sessions addressing the most effective ways to search for a job;
- **Interviewing and Job Negotiation:** What to expect during the interview, how to negotiate an offer, complemented by mock interviews in advance of any actual interviews;
- **Resume Writing Class:** Effective writing and design of the business resume.

Consequences / Benefits:

The main results of this effort were that 1) 95% of the people who wanted a next position were placed in one, and 2) when employees saw this success, they felt more comfortable to stay. That meant we were able to retain employees longer than we might have been able to otherwise.

Implementation & Effectiveness:

The process was implemented when the closure of the project really got underway. Frequent and varied communication kept employees informed about the many opportunities they would have to prepare for their end of assignment. Identification of job openings by their managers, coaches, and on the Workforce Transition website also helped employees to feel the care of the company. The main demonstration of effectiveness, however, was the feedback from employees stating that they had never worked at a place that

Lessons Learned

had this much interest in helping them move on.
APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input checked="" type="checkbox"/> Other (Explain) <u>FAR-based contractors</u>

Lessons Learned

Lesson: 3.2.5
Title: Evaluate How Closure Will Affect Benefit Programs
<p>LESSONS LEARNED SUMMARY: Depending on whether the contract closeout is determined by the contracting officer as either a continuation of the base contract (as in assigning closeout a separate contract line item number) or is considered a separate contract will have different effects on personnel benefits programs. There is a need to work with the contracting officer well in advance of the completion of field work to ensure benefits are not jeopardized. Because this approach had not been taken, WCH uncovered several potential benefits issues during the closure process. Some have not yet been resolved.</p>
<p>DISCUSSION Description: Per the DOE workforce restructuring requirements (see for example, the Secretary of Energy, May 5, 2011 memorandum, "Authorized Changes to Workforce Restructuring Policy"), restructuring at defense nuclear facilities under Public Law 102-484 (Section 3161) has explicit implications relative to benefits. Among the issues WCH pursued with the contracting officer were the following: 1) eligibility for Displaced Worker Medical Benefits (DWMB) when an employee is eligible for Post-Retirement medical benefits (PRMB). At Hanford, an employee is permitted to use DWMB when laid off even if otherwise eligible for PRMB. Since DWMB is available at a lower cost, this costs the plan more. 2) Long-term disability until age 65, even when the person was pensioned out under Worker's Compensation. 3) The need for a mechanism to capture information on whether an employee has previously received severance pay for any portion of their service. Given the ability of employees to transfer among the various site contracts could result in an employee being paid severance more than once for the same period of service. 4) Other questions such as availability of flexible spending accounts also lingered past the date of the opening of the closeout office.</p> <p>As it relates to the potential for duplicative severance payments, WCH implemented a notice for employees to sign disclosing whether they have received severance for any of their service and to provide information on what was received from where. This was implemented at the very end of the project. WCH recommends that it be considered for implementation at the start of the project when employees seek restoration of service.</p>
<p>Consequences / Benefits: These and other benefits-related items were all determined at the end of the contract, but the major consequence/benefit of addressing these should be reduced costs for the plans and avoid potential anxieties for employees.</p>
<p>Implementation & Effectiveness: The need is to have a well-defined agreement in advance of closeout that details the benefits and any changes thereto.</p>
<p>APPLICABILITY: <input checked="" type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input checked="" type="checkbox"/> Other (Explain) HEWT</p>

Lessons Learned

Lesson: 3.2.6

Title: Implement Processes That Ensure Capabilities Are Not Jeopardized by Reducing Staffing

LESSONS LEARNED SUMMARY:

As reductions occur in a workforce, it is necessary to ensure that knowledge and expertise that will continue to be needed is not lost. Because reduction decisions are often based on job titles, it is easy to overlook the full measure of an individual's roles and responsibilities. Not to give full consideration prior to the release of personnel can result in the project going forward at risk or with many unforeseen gaps in capability. WCH implemented responsibility profiles for use in maintaining detailed records of employees' primary and secondary duties during closure.

DISCUSSION

Description:

WCH developed a multi-pronged approach to ensuring a complete evaluation of each individual's responsibilities prior to their release. This evaluation considered what their activities were and what risks the loss would create. The first step, which was completed by all employees irrespective of the schedule for their release, was preparation of a "Responsibility Profile." Each profile detailed the individual's key responsibilities. For each responsibility, the profile identified what document or deliverable was produced, who the recipients were, where the documents were stored, and other pertinent information that would allow someone assuming that responsibility to complete the task.

The profiles were designed to capture a more detailed look at an employee's responsibilities and deliverables. As decisions were made to release an employee at the end of his/her assignment, the manager would use the profile to decide which responsibilities would end and which would need to continue. Those that needed to continue would be assumed by another employee. The manager could then ensure proper advance training before the release of the employee. Looking at all the profiles together could help the manager plan ahead to how work would be collapsed in advance of making any decisions. If done early enough, managers could even plan for development necessary for others to be able to do other work.

The next layer of control ensuring needed expertise was not lost or inadvertent risk created required the manager of an individual planned for release completing a "Release Impact Summary Checklist." This multi-part form first required detail on whether the individual to be released had safety or essential business responsibilities and, if so, were these responsibilities associated with work the employee did directly or were they oversight responsibilities. The next set of information required the manager to specify if the individual was a) essential to day-to-day operations, b) a specialist or a key support to safety or business activities, or c) not critical. If the individual was essential or a key support, the remainder of the form was used to detail the risk that could result from his loss.

These forms were then reviewed well in advance of the individual's release at a meeting attended by Human Resources and senior management. These meetings would be used to ensure there were not any unintentional issues that would be created (such as concurrent releases of personnel in different departments whose collective loss may have had consequences beyond those anticipated by an individual manager) and, if needed, to consider how the responsibilities might be absorbed into the work of other people who were remaining with the project.

Consequences / Benefits:

This process was a benefit for managers in terms of helping them plan ahead for end of assignment dates that made sense and to make sure that they would have the necessary trained resources to complete remaining work. It also created developmental opportunities for employees that were willing to take on new roles.

Information shared among the senior staff helped the directors to be aware of who was leaving and what

Lessons Learned

their responsibilities were so they could ensure that the releasing manager was aware of work being done for their project or function by that employee and that the manager had a plan to cover the work.

Implementation & Effectiveness:

A standard process needs to be implemented so that personnel releases are evaluated in a broad (project-based) context. The success of the program can be gaged by whether all affected organizations are well apprised of changes in staffing before they occur and personnel are retained based on project needs rather than on localized staffing plans.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

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4 Project Management

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Lessons Learned

Lesson: 4.1
Title: Implement a Means to Immediately Address Contract Baseline Changes
<p>LESSONS LEARNED SUMMARY:</p> <p>There were many more changes to the contract baseline than originally anticipated. Some work scope was deducted from the baseline including interim safe storage of K Reactor, retention of Pacific Northwest National Laboratory 300 Area facilities, and retention of the 324 facility due to discovery of a highly contaminated waste site under the facility. Approximately \$1 billion in additional work scope was also added to the baseline due to additional waste quantities and newly discovered waste sites. By establishing an executive management steering committee, the River Corridor Closure Action Team (RCCAT), emerging baseline changes were identified and prioritized for implementation. This helped to keep management informed and united on project direction.</p>
<p>DISCUSSION</p> <p>Description:</p> <p>At the beginning of the contract the RCCAT was established to control contract baseline changes. Authority for authorizing work as well as cost performance oversight and integration were administered through the WCH RCCAT. This team, composed of senior management, helped fulfill the three main objectives in overall WCH portfolio funds management: 1) ensured adequate funding had been allocated to the River Corridor Closure Contract before performing work; 2) stayed within contractual budget guidance and authority, and 3) ensured 100% (or near) the authorized/anticipated cumulative funding was being effectively utilized.</p> <p>In making decisions, the RCCAT considered: 1) risk reduction (to workers, the public, and the environment); 2) regulatory compliance; 3) closure acceleration; 4) maximizing efficiency of waste shipments and disposal; 5) subcontracting efficiencies (e.g., grouping similar work in a particular geographic area); and 6) resource optimization: enhancing worker/material/equipment availability.</p> <p>The RCCAT met frequently (at least monthly) throughout the contract to discuss emerging changes and agree on implementation of contract baseline changes based on priority and available funding. Meetings were also convened whenever a more pressing issue existed—including use of online voting when necessary. Early identification of performance trends were also communicated at these meetings.</p> <p>Performance trends and emerging contract baseline changes were presented at RCCAT meetings using the Portfolio Management Analysis Sheet. This sheet provided details on all projects and all functions: available and projected funding, current fiscal year forecast, Integrated Project Baseline (IPB) and Contractor Performance Plan (CPP) budget data, the current budgeted cost of work scheduled, budgeted cost of work performed, contingency utilization, and actual costs. This meeting was also used to discuss and vote on assigning budget to emerging or confirmed scope changes affecting individual estimates at completion (EACs), the CPP, or contingency needs. An affirmative RCCAT vote was required to implement each change. Changes to both the IPB and CPP were controlled in this manner. RCCAT meeting minutes were kept and distributed to document and communicate all changes.</p>
<p>Consequences / Benefits:</p> <p>By constantly maintaining and discussing an up-to-date list of priority, emerging, and potential changes to the contract baseline, management stayed informed and united on project direction. Management was able to make the most efficient use of contract funds by starting, accelerating, or deferring work based on available funds. With early identification of these changes and trends, management was able to avoid many unanticipated conditions. Implementation of this process contributed to the contract's 12% favorable cost variance.</p>
<p>Implementation & Effectiveness:</p> <p>A formal system needs to be established for routine and non-routine meetings. Protocols on decision making need to be established and up-to-date information on funding, variances, EACs, and emerging trends and</p>

Lessons Learned

risks need to be available and presented in a straightforward manner so as to assist all personnel involved, including those who may not be cost account managers.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 4.2
Title: Constantly Track Funding Needs
<p>LESSONS LEARNED SUMMARY: Due to congressional budget cuts, continuing resolutions, and sequestration, DOE was not able to meet the original contract funding profile. In June 2012, DOE unilaterally and significantly reduced the contract funding profile (Mod. 392), resulting in a delay in the planned contract completion date. In May 2015 the contract funding profile was again modified (Mod. 625) to extend the contract 1 year. The many changes in contract funding required funding needs to constantly be compared to available funds.</p>
<p>DISCUSSION Description: The WCH contract established a funding profile for the entire 10-year duration of the contract. This profile allowed planning and scheduling that projected 10 years of sequencing of the work. To support this concept, the contract stipulated that 90% of the cumulative funding and 95% of annual funding had to be provided by DOE; otherwise WCH was entitled to submit a Request for Equitable Adjustment.</p> <p>At the beginning of each fiscal year, DOE would provide funding guidance for the year. The funding guidance was compared to the year's spend plan, and adjustments were made to the work scope throughout the year to stay within the funding guidance. This required the spend plan to constantly be updated so the most up-to-date spend plan could be compared to the funding guidance.</p> <p>Initially, only the current year spend plan was monitored on the Portfolio Management Analysis Sheet. As the end of the contract drew near, WCH found it needed to start monitoring its spend plan for the remainder of the contract by fiscal year to allow for early identification of funding shortfalls. WCH created the Outyear Spend Plan vs. Funding Analysis sheet. This sheet was constantly updated and presented at each River Corridor Closure Action Team meeting as a basis for project direction decisions.</p>
<p>Consequences / Benefits: By constantly maintaining an up-to-date spend plan for the remainder of the contract by fiscal year and comparing it to anticipated funding, funding issues were identified early, allowing time to resolve them and reduce impacts to the project. Positive and negative cost performance trends were identified early so management could react appropriately. Cost efficiencies were identified early so excess funds could be used to accelerate work. The project never went anti-deficient. Funding needs were identified and communicated to DOE well in advance of performing the work. Cost efficiencies were used to accelerate work, which in turn contributed to the project's 12% favorable cost variance.</p>
<p>Implementation & Effectiveness: Maintaining alignment between funding and spending is a predicate of all project management and a first principle of an Earned Value Management System. A system needs to be established that allows for tracking of funding versus funding on a real-time basis, and which is regularly reviewed in order to anticipate and address any impending problems.</p>
<p>APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____</p>

Lessons Learned

Lesson: 4.3

Title: Establish an Accelerated Work Plan to Complement the Contract Baseline

LESSONS LEARNED SUMMARY:

By maintaining a Contractor Performance Plan (CPP) separate from the Integrated Project Baseline (IPB), a more aggressive schedule can be planned and worked, yet still maintaining the contract baseline for contract performance measurement purposes.

DISCUSSION

Description:

The River Corridor Closure Contract (RCCC) was a schedule and cost-incentivized contract that provided fee incentives for finishing the work early and under budget. Accelerating work whenever possible improved cost and schedule performance, which was measured by DOE against the IPB. By creating the CPP, WCH was able to plan the work based on an accelerated work plan and still maintain the IPB for performance measurement and reporting purposes.

The RCCC scheduling process supported the integration of the project's cost and schedule objectives in order to meet resource planning, performance measurement, and other project management requirements. The schedule control system ensured that work was planned and scheduled, established interfaces between project participants, provided visibility of work progress, and provided valid schedule information necessary to make timely management decisions.

The project scheduling hierarchy consisted of four levels:

Level I Schedule – RCCC Master Schedule

Level II Schedule – Integrated Performance Baseline (IPB) Schedule

Level III Schedule – Contractor Performance Plan (CPP) Execution Schedule

Level IV Schedule – Detailed Project/Functional Schedules

The Level I master summary schedule was used to convey the overall project schedule baseline in a concise, easy to understand format. The Level II IPB baseline schedule (which was under DOE configuration management) was the WCH plan for accomplishing the RCCC scope of work. This schedule provided a level of detail sufficient to address and display the scope of work for the project at the work/planning package level for the complete RCCC period of performance

The Level III execution schedule provided the detailed resource plan and activities to accomplish the requirements of the baseline schedule. The CPP (execution schedule) provided a more detailed implementation schedule and forms the basis for determining schedule progress and earned value. Prepared at the code of account/activity level, the execution schedule also showed in detail the integration points between WCH, DOE-RL, and the regulators. Level IV detailed schedules were developed as required to support work execution.

Consequences / Benefits:

The CPP allowed for an accelerated work plan, which in turn led to earlier completion and increased cost savings to the government and additional WCH cost performance incentive fee. It also freed up funding to perform additional work. The CPP allowed for the work to be planned the way it would be performed, which could vary from the way the work was planned in the IPB. By using the CPP, WCH was able to work a plan more aggressive than the IPB, which provided funding to perform additional work and contributed to the project's 12% favorable cost variance. It also resulted in WCH earning a large portion of the contract's schedule performance incentive.

Implementation & Effectiveness:

Differentiating between the project baseline and a more aggressive schedule used for work planning and

Lessons Learned

statusing allows greater flexibility in schedule, cost, and critical path scheduling. Establishing the two plans requires a tight configuration control to ensure the two plans always remain aligned.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 4.4
Title: Accrue Monthly Cost of Services Performed But Not Yet Paid
LESSONS LEARNED SUMMARY: The cost of services performed but not yet paid should be accrued monthly so actual cost aligns with reported performance. This results in more accurate cost performance reporting.
DISCUSSION Description: Fairly early in the contract, WCH created an accrual system module in which either the subcontract technical representative or the project controls engineer entered service-to-date or fixed accrual information. This system interfaced with the accounts payable system to determine the amount to be accrued each month, which is the difference between the service-to-date information from the accrual system and the payments from the accounts payable system. The system calculated and generated the accrual. The system also allows for the entry of fixed accruals. All accruals were reversed the following month, and new accruals were generated at the end of each month based on changes in service to date and payments made.
Consequences / Benefits: By generating accruals each month, actual cost aligns with reported performance and results in more accurate performance measurements. It eliminates timing differences between when the work is performed and when the work is paid for. After the WCH accrual system was implemented, cost performance measurements were more accurately reported and performance reports were more reliable. The accrual system also enhanced valid charging by reporting invalid charge codes and negative accruals on an exception report.
Implementation & Effectiveness: Develop a means to capture and report accruals so as to have a more complete indication of total costs and obligations. The system should be simple and support ready coordination among the field personnel, accounting, and projects controls.
APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 4.5

Title: Utilize the Monthly Performance Report as a Key Communication Tool

LESSONS LEARNED SUMMARY:

A comprehensive monthly performance report that integrates safety, risk, schedule, performance, accomplishments, issues, and actual cost for all major project areas is a standard tool and requirement. Efforts need to be made to expand this communication tool to provide information of interest to a wide array of interested communities--local community, stakeholders, local and headquarters clients, parent companies, and regulators.

DISCUSSION

Description:

Each organization within WCH played an important role in the contract and contributed toward project success. Bringing each organization's performance together into a single integrated report gave management and DOE a comprehensive view of the entire project. It helped to identify priorities in the overall project.

Each month the Project Integration organization solicited and gathered important information from all project organizations and compiled it in a consistent manner for management and DOE. This report was a requirement of the contract. It included safety, risk, schedule, performance, accomplishments, issues, and actual cost information for all major project areas. It was distributed to management and DOE in the month following the month reported. Prior to distribution, a draft was distributed for management review and comments.

It also, all the way through closeout of the project, reported on the cumulative cost variance, a critical component of the final determination of the earned fee for cost savings. Because of the magnitude of the savings, losing sight of this number might have led to a surprise for decision makers outside the immediate project area. Similarly, the report maintained a running list of all requests for equitable adjustment, including those that had been recalled or negotiated, and a list of all government-furnished services or information owed to the contractor (such as approvals of submitted plans).

Other information included in the performance report included cumulative and annual detail on performance against socioeconomic goals and status against all contractual milestones and Tri-Party Agreement milestones (milestones established jointly by DOE, the Washington State Department of Ecology, and the U.S. Environmental Protection Agency).

Consequences / Benefits:

Not only did this report fulfill a contract requirement, it helps management and DOE stay informed on overall project performance in a consistent and organized manner.

Using the performance report to keep all communities apprised of issues and performance was one part of a comprehensive communication program. A high-quality integrated monthly performance report was compiled and distributed each month over the life of the contract. It provided a single source for much of the information needed by DOE and management to manage the complex and ever-changing WCH project. Keeping management and DOE informed on project performance contributed to the overall success of the project.

Implementation & Effectiveness:

The performance management report needs to be evaluated as a key component of the project's communication strategy--who will see it, what would they need to be informed about, and how would they expect the information to be presented. Then the report has to be designed to allow the information to fit together into a tight package that sends the information and messages the project needs to disseminate.

Lessons Learned

APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 4.6
Title: Implement an Integrated Hierarchy of Schedules
<p>LESSONS LEARNED SUMMARY: Develop a hierarchy of resource-loaded schedules that are fully integrated with the performance reporting system. The River Corridor Closure Contract scheduling process supported the integration of the project's cost and schedule objectives in order to meet resource planning, performance measurement, and other project management requirements. The schedule control system ensured that work was planned and scheduled; established interfaces between project participants; and provided visibility of work progress and valid schedule information necessary to make timely management decisions.</p>
<p>DISCUSSION Description: The project used project scheduling software (P6) that could integrate with the project performance reporting software (COBRA). This allowed the project schedule to be the source of project performance reporting. It required consistency between the project schedule and project performance reporting. Project schedule and performance were reported to management in the monthly performance report. Project schedules were made available to management in the plan of the week package.</p> <p>The critical path method was used to develop the Integrated Project Baseline and Contractor Performance Plan schedule and was employed monthly to identify progress against baseline critical path(s). In this regard, the execution and baseline schedules were monitored each reporting period for progress against planned accomplishments. Events not accomplished were reviewed by the cost account manager, and corrective actions were developed and implemented. The River Corridor Contract Action Team reviewed the progress each reporting period, and required corrective action plans were approved, initiated, and tracked. Schedule status information was transferred to the cost processor for calculating earned value for the preparation of internal and external schedule performance reports.</p>
<p>Consequences / Benefits: Project schedules become the source of project performance reporting. The project works to the same schedule that is used for performance reporting. Integrating the project schedules with project performance reporting contributed to the projects' favorable cost and schedule variances. The ability to coordinate work schedules at all levels (from project to work package) was the foundation for delivery of an average schedule performance index of 1.10 for the project.</p>
<p>Implementation & Effectiveness: Develop a schedule hierarchy sufficient to support all levels of work planning and execution. The schedules must provide for both vertical and horizontal traceability and provide for an expedient change process that maintains alignment among all levels within the hierarchy.</p>
<p>APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____</p>

Lessons Learned

Lesson: 4.7
Title: Reinforce Performance Accountability Throughout the Management Chain
<p>LESSONS LEARNED SUMMARY: A single meeting to review status is insufficient to ensure all the critical dimensions of each project are well understood and integrated. In addition to the routine meetings of the River Corridor Action Team (RCCAT), WCH instituted a monthly performance review for a more detailed look. Approximately halfway through the contract, another, even more detailed examination was added to the review cycle to ensure full knowledge and strict accountability for the performance of each project under way at WCH.</p>
<p>DISCUSSION Description: Each month the Project Integration organization gathered detailed information from all project organizations and compiled it in a focused review package. Much of the information in this package was also in the monthly performance report, but additional staffing and earnings information was included. This package was presented to management by the various project managers at a monthly project review meeting. Delving much deeper than in the regular RCCAT meetings, these project review meetings examined safety, risk, schedule, performance, accomplishments, issues, and actual cost information for all major project areas.</p> <p>Midway through the project, regular (usually monthly) project management and project controls meetings were established to complement the RCCAT meetings. These additional meetings, often referred to as 4-on-2 meetings, usually included the project director, the project controls lead, president, vice president, Project Integration director, and project controls manager. These meetings, which examined progress at a deep level of detail, focused mainly on cost and schedule. They required project managers and project controls to evaluate a particular project's cost and schedule each month. Trends, variances, staffing, emerging issues, and status of risk mitigation actions were discussed.</p>
<p>Consequences / Benefits: These regular meetings ensured that project management took time each month to focus on cost and schedule at an appropriate detailed level. The meetings improved communication between project management and project controls. They helped to avoid unanticipated situations and conditions by identifying trends and variances early. Once they were implemented, working relations and teamwork improved. Unanticipated situations and conditions were avoided.</p>
<p>Implementation & Effectiveness: These regular meeting were not implemented until midway through the projects. A project could have benefited from these meetings sooner if they had been implemented sooner.</p>
<p>APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____</p>

Lessons Learned

Lesson: 4.8

Title: Maintain a Formal Approval Process to Request Parent Affiliate Support

LESSONS LEARNED SUMMARY:

A formal approval process should be maintained to request parent company affiliate support, including written description of work to be performed and estimated hours before the start of work.

DISCUSSION

Description:

WCH was a limited liability company owned by three parent companies: AECOM (40%), Bechtel (30%), and CH2M HILL (30%). The WCH contract allowed WCH to obtain labor support from its parent company affiliates. A formal approval process (Request for Offsite Services [ROS]) was established to obtain this support throughout the contract. The ROS form included a full description of the work to be performed by the affiliate employee(s) and the estimated cost and hours required. It was reviewed and signed by the originator, affiliate company manager, functional/project manager, and functional/project director prior to the start of work.

Consequences / Benefits:

Advance approval of parent affiliate support helped manage the work being performed by parent affiliate employees. Managers and the company as a whole were more aware of the number of affiliate employees that were supporting the project and the nature of the work they were performing. They had an estimated cost and duration of the assignment. It allowed greater control of these labor resources. This process was implemented at the beginning of the contract. It was carried over from the previous contract. However, several enhancements were made during the WCH contract. Allowances were made in times of emergency to complete the ROS form after the affiliate employee's arrival. But, this was an exception. Occasionally, the affiliate employee stayed longer than originally planned, in which case the ROS form was revised and reapproved.

Implementation & Effectiveness:

Either the contract or an Advanced Agreement on Cost should be used to establish the types and dollar thresholds for support to be procured from the parent companies. A formal approval logic should be instituted to maintain an appropriate balance among the parent companies if more than one is involved.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 4.9
Title: Maintain Continued Visibility of Risk Mitigation Activities
<p>LESSONS LEARNED SUMMARY: A large number of risks were identified at the beginning of the contract. By establishing a risk management system, these risks could be evaluated, tracked, and modified as the project progressed. Additional risks were added to the system as they were identified. Visibility of risks was maintained by including discussion of new and emerging risks along with discussion of risk mitigation action at each meeting of the River Corridor Action Team. By identifying risks early and constantly evaluating them to determine ways to mitigate them, the project was able to avoid many unanticipated problems, improve project safety, and reduce overall project cost.</p>
<p>DISCUSSION Description: During the project transition phase of the contract, a rigorous risk evaluation was performed. This evaluation resulted in the identification of 60 key risk items valued at \$85 million. This initial set included both baseline risks (risks that are associated directly with specific activities in the baseline) and programmatic risks (risks that typically affect many or all aspects of a project, e.g., failure to acquire full project funding on schedule, labor issues, or natural phenomena). Over the course of the project, more than 150 risks were accounted for in the risk register and more than 300 mitigation actions tracked.</p> <p>Each risk was evaluated as high, medium, or low, and potential cost and safety impacts were determined. Each month the risks were reevaluated and modified as conditions changed and the project progressed. Additional risks were added as they were identified. Risk mitigation strategies were developed. Risk updates were included in the monthly performance report. The risk management section of the report included emerging risks; risks closed during the prior month, risk mitigation activities due in the next 3 months, and unusual activities (unexpected cost or schedule impacts for mitigation activities, go/no-go decisions, or deployment of contingency for risk mitigation). Risks were also extensively discussed in the monthly project review meetings.</p> <p>Risks were tracked in this fashion until they were closed. Potential financial liabilities from risks categorized as medium or high were also factored into earning projections by the Finance department. These earnings adjustments made the risks all the more visible, and ensured attention was paid not only by the senior management team, but also by the corporate finance committees and the WCH Board of Managers.</p>
<p>Consequences / Benefits: Early identification of risks allows management to develop ways to mitigate them to avoid or reduce safety and cost impacts. It allows integration of risk concerns into project planning and management and provides advance warning so attention can be focused on high-risk areas. Implementation of a risk management system contributed to the contract's excellent safety record and 12% favorable cost variance.</p>
<p>Implementation & Effectiveness: As part of establishing the risk management program, determine means to keep risks visible and understood at all levels of management.</p>
<p>APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____</p>

Lessons Learned

Lesson: 4.10

Title: Have Frequent Interface Between Project Controls and Accounting

LESSONS LEARNED SUMMARY:

Since actual cost information is fed from the accounting department to the project controls department, it is essential that project controls and accounting interface frequently. In order to do this, WCH established a standing project controls/accounting weekly meeting.

DISCUSSION

Description:

Establishing a standing weekly meeting required participants to consider topics that needed to be discussed and future interactions that needed to be planned. The meetings were also used to share information regarding current and upcoming work being performed by the two departments. System processes and interfaces, scheduling, accruals, funding, fee status, and request for equitable adjustment (REA) status were some of the more frequent items of discussion. The meeting was mainly for those involved in detailed day-to-day tasks, but management was also invited to attend.

An area that was of significant benefit was in understanding REA and earnings forecasts. Because the project controls numbers often differed from those in the finance department, several times representatives of the parent organizations were unsure which numbers to use in their own spreadsheets. Establishing better alignment through an articulation of all the underlying assumptions used by the two departments resulted in better, more consistent, and more reliable numbers.

Consequences / Benefits:

These meetings greatly improved communication and working relationships between the two departments. The meetings helped to avoid unanticipated issues. These recurring meetings were scheduled for the same time each week. Occasionally the meetings were canceled if there was nothing to be discussed. However, many times items that needed to be discussed were discovered at the meeting, and many misunderstandings were resolved and problems avoided. These meetings helped to improve the flow of accrual and actual cost data between the two departments.

Implementation & Effectiveness:

Ensure active engagement between project controls and finance. In particular, efforts should be made that all assumptions used by the two departments for establishing estimates at completion and earnings forecasts are made clear and apparent so that any differences are understood by management and the parent companies.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 4.11
Title: Include Field Personnel When Developing Request for Equitable Adjustment Productivity Impact Analyses
LESSONS LEARNED SUMMARY: Perform a walkdown of the proposed change with a knowledgeable field project person and the DOE or client subject matter experts and regulatory stakeholders (as applicable). Establishing strong working relationships between Project Controls and the field--including embedding Project Controls personnel in the project organizations--contributed to more accurate and through analyses and projections.
DISCUSSION Description: During the review and negotiation of requests for equitable adjustments (REAs), WCH experienced several rounds of requests for information (RFIs), particularly when the REA was due to productivity impacts (as example, an REA that sought adjustment for the added costs resulting from a delay by DOE in releasing buildings in the 300 Area for demolition). The projects experienced a significant difference in the type and number of RFI questions received. When a changed condition is encountered, immediate notification to the applicable contractor management and client personnel needs to be made in writing. In addition the knowledgeable contractor, client, and regulatory personnel should conduct a joint walkdown/discussion as soon as possible to document and resolve any questions. This approach will minimize the resolution of all change requests.
Consequences / Benefits: Streamlining the processing of REAs for both the contractor and the client could improve the quality of the REA documentation for both parties.
Implementation & Effectiveness: Both the contractor and client project management need to make the commitment to communicate changed conditions immediately and follow through with walkdowns and resolve questions prior to issuing the REA. A joint process should be established to document the preliminary walk downs, discussions, questions/ answers, and commitments when changed conditions occur. This process should be done as a preliminary action prior to REA development. If this was implemented effectively, the client/stakeholders would be aware of the situation and proper documentation of the changed condition would be captured for future reference.
APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 4.12
Title: Make Proposal Documentation Available
LESSONS LEARNED SUMMARY: The WCH field management team felt that there was a missed opportunity during the first few years of the project. There was a repetitive need for field management to have access to, and/or briefed on, the proposal documents. Having this documentation within the first few years of contract implementation would have provided the field implementation management team the insight into why/how the contract proposal was structured.
DISCUSSION Description: The proposal documents were not available to support management of the baseline. Cost account managers were not able to access the background/basis, assumptions, and cost estimates to manage cost and schedule reporting. When variances were encountered, explanations were vague and not founded on the proposal information. Had the implementation management team had a solid understanding of the proposal within the first few years. it would have added value to managing changed conditions and develop factual variance explanations. In addition, having access to the proposal documents would have assisted in supporting the development of requests for equitable adjustments.
Consequences / Benefits: Provide the managers with the background/basis, assumptions, and cost estimates to manage cost and schedule reporting and implement appropriate change control and cost tracking. Without this basic understanding of how the contract was structured, it created a gap during implementation.
Implementation & Effectiveness: Develop a sortable database of the proposal documentation and provide secure access for cost account managers and project control personnel.
APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 4.13

Title: Include Closeout-Related Costs in the Contract

LESSONS LEARNED SUMMARY:

The WCH contract was totally silent as regards costs and funding for the closeout office. Although, as closeout neared, many costs were resolved with development of an Advanced Agreement on Cost, several cost categories remained highly problematic. One such issue was that WCH had failed to include severance pay in the base cost during the proposal process. This resulted in need for extensive discussion about what costs were included and the amount to be recovered from DOE. A clearer and less contentious path forward might have occurred had the costs been identified and captured in the proposal and in the contract.

DISCUSSION

Description:

Being that the River Corridor Closure Contract was a closure contract, it had many features that were different from the standard management and operations contract used at the majority of DOE sites. One such feature was the fact that when the contract ended there would be no successor contractor; that meant that all personnel would be terminated. That release, in turn, meant that personnel (both represented and non-represented who did not find other Hanford Site assignments) would be eligible for severance pay.

Only when WCH filed a request for equitable adjustment (REA) for recovery of anticipated severance costs did the issue surface. At the same time, other related benefits costs were also identified as requiring resolution (e.g., how to address personnel who were out on either short- or long-term disability).

Consequences / Benefits:

Unplanned costs became a major source of contention between WCH and the client. It was clear that neither side had anticipated or accounted for such costs as severance and other benefits. Much of the debate would have been avoided had either the contract or an Advanced Agreement on Cost established what costs would be allowable and how the amount of those costs would be determined.

Implementation & Effectiveness:

For closure contracts in particular, a full evaluation at the time of proposal should be made of all the implications (human resource and otherwise) that will be anticipated at the completion of the contract. These costs should be accounted for in the proposal and captured in an appropriate manner (preferably the contract) so as to avoid protracted issues at the conclusion of the contract.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) Parent companies

5 Work Performance

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5.1 Safety

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Lessons Learned

Lesson: 5.1.1
Title: Build a Safety Culture
LESSONS LEARNED SUMMARY: Management and staff must have a long-term commitment to building a safety culture throughout the project.
DISCUSSION Description: Right from the start of the project, WCH made safety its first priority. It began each meeting with a safety topic. Regular safety meetings were held. Employees were encouraged to identify safety concerns and were given the authority to stop work if they witnessed an unsafe condition. Safety programs were instituted. The project earned and maintained Voluntary Protection Program (VPP) Star Status. Favorable safety performance was rewarded. Managers demonstrated their commitment to safety throughout the project.
Consequences / Benefits: Due to management's long-term commitment to building a safety culture on the project, WCH achieved some of the best safety statistics in the entire DOE complex.
Implementation & Effectiveness: Safety was made first priority at the beginning of the project. Management continued to build on the existing program, constantly looking for ways to improve safety and encourage employees to look out for each other and identify any safety concerns. A safe project is also a cost-efficient project. The project's excellent safety performance contributed to the project's favorable cost and schedule performance.
APPLICABILITY: <input checked="" type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 5.1.2
Title: Establish a Senior Supervisory Watch Program
LESSONS LEARNED SUMMARY: Establish a senior supervisory watch program early and maintain the program.
DISCUSSION Description: WCH established a senior supervisory watch program. Senior management personnel devoted time in the field observing work practices. The senior managers provided oversight and mentoring to the field work supervisors and lead personnel. The activity was documented through management observation forms and the quality assurance Corrective Action Management program.
Consequences / Benefits: Management walkthroughs were performed on a routine basis and documented on a management walkthrough form. At least two walkthroughs a month were required of all supervisory and management personnel. These forms identified both good work practices and those needing improvement. For those areas needing improvement, an issue identification form was completed to document the issues, identify the corrective actions, and ensure the actions were tracked through completion.
Implementation & Effectiveness: Implementation requires senior management commitment. Specific expectations should be set for management support activities and the system for tracking completion of corrective actions needs to be simplified so that the capturing and resolution of issues does not represent an arduous administrative burden.
APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 5.1.3

Title: Establish Safety Incentives for Complex Subcontracts

LESSONS LEARNED SUMMARY:

Safety incentives established for subcontracts with complex or long-duration work scopes can be effective in aligning the subcontractor with the contractor's safety culture.

DISCUSSION

Description:

Several years into the WCH contract, WCH negotiated with DOE to allow safety incentives to be incorporated into complex construction contracts. These incentives required that the money be shared with all of the subcontractor's employees. Very specific safety performance criteria were established, and the subcontract technical representative (STR) was designated as the sole individual who would determine whether the quarterly performance achieved the specified goals.

Because overall safety statistics included the hours worked by subcontractors, there was an immediate need to ensure subcontractor safety performance was every bit as good as that of WCH personnel.

Consequences / Benefits:

Safety incentives assigned to the subcontractors proved to be an important tool in promoting the safety culture and maintaining high safety performance. During the tenure of the contract, WCH achieved 1 million safe hours 22 times, won 7 VPP safety awards, and finished the contract with 7.3 million safe hours, the highest ever achieved by a remediation contract.

Implementation & Effectiveness:

Extensive negotiations were required between the WCH and DOE safety organizations in order to come to agreement on the safety criteria, the mechanics for the determining the amount of each quarter's awards, and the oversight of the program. Once implemented, meetings were held in advance with each subcontractor to ensure the criteria were understood. There also was training for the STRs to ensure a certain common level of application. Overall, the safety statistics--which included WCH being ranked the #1 DOE environmental contractor--remained exceptional throughout the period of performance.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 5.1.4

Title: Establish a System to Flag When Individuals May Exceed a Safe Number of Work Hours

LESSONS LEARNED SUMMARY:

It is important to monitor the number of hours and days being worked in any pay period to ensure that the health and well being of employees is not jeopardized. To assist the supervisors with this responsibility, a system is needed that alerts the supervisor when any work thresholds are being approached or exceeded.

DISCUSSION

Description:

As part of its safety program, WCH established thresholds for the number of hours that could be worked in a single day, the number of hours worked within a 7-day period, and the number of successive days that could be worked without having a day off. These thresholds were important to ensure that workers did not jeopardize their health or create other unacceptable risks (e.g., operating machinery or driving vehicles while too exhausted to be safe).

Given the size of the organizations and the routine work demands, it was difficult for supervisors to be fully knowledgeable of these numbers for each member of their crew. So, WCH developed an online alert system that was linked to the time card system. Whenever anyone approached one of the thresholds, the supervisor received a notice indicating which threshold was affected and the amount of time or number of days until the threshold would be exceeded. These notices were provided with sufficient lead time to allow the supervisor to take appropriate actions to avoid exceeding the threshold.

Should there be a strong justification for exceeding a threshold, the supervisor would have to obtain pre-approval from his/her manager. Depending on the extent of the anticipated exceedance, some actions even required project manager pre-approval.

Consequences / Benefits:

The system was well received by supervisors and employees because it was recognized as being supportive of workers' health and safety. Overall, although there is no means to define a direct correlation, this advanced alert system, in conjunction with all the other components that contributed to the safety culture, was understood as having a positive effect on safety performance. This system was identified in several audit reports as an industry best practice.

Implementation & Effectiveness:

The implementation was in two steps: 1) establishing credible safety thresholds for worker safety. These limitations were based on study of safety reports and studies; and 2) building a basic application that used the payroll and human resources databases to determine the hours worked and the organizational structure to determine who should receive alerts.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 5.1.5

Title: Support the Local Safety Improvement Teams

LESSONS LEARNED SUMMARY:

Management needs to encourage and support Local Safety Improvement Teams (LSITs).

DISCUSSION

Description:

The River Corridor Closure Contract allowed a reasonable amount to be spent on safety programs. WCH made safety its first priority throughout the project. The project was divided into local areas, and local area safety teams were established to address detailed safety concerns at the local level. These teams consisted of local area employees who had first-hand knowledge of local area work processes. They helped to resolve safety concerns identified by employees within the local area and rewarded good safety performance. LSITs helped employees take ownership of their work area safety environments. Management's support of these teams contributed to the success of the LSITs. As employees witnessed management's support of the LSITs, employees were more willing to participate in LSIT programs.

Consequences / Benefits:

Management's encouragement and support of the LSITs contributed to their success. LSIT successes helped to achieve some of the best safety statistics in the entire DOE complex, including 7 million hours without a lost time accident. They helped employees to know of management's commitment to safety and helped employees develop their own safe work environment and safety in all aspects of their lives.

Implementation & Effectiveness:

LSITs contributed to the project's excellent overall safety record. A safe project is also a cost efficient project. The project's excellent safety performance contributed to the projects favorable cost and schedule performance.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 5.1.6
Title: Recognize Outstanding Safety Performance
LESSONS LEARNED SUMMARY: Outstanding safety performance needs to be rewarded and receive visible recognition.
DISCUSSION Description: The River Corridor Closure Contract allowed a reasonable amount to be spent on safety reward programs. WCH made safety its first priority throughout the project. Safety programs were established to reward outstanding safety performance. These included both on-the-spot awards for routine or daily acts of safety and longer term safety awards for outstanding safety performance over time. Employees were regularly recognized among their peers for exceptional acts of safety. Events were periodically held for employees to recognize outstanding safety performance.
Consequences / Benefits: Maintaining active programs of visible recognition for outstanding safety performance helped to achieve some of the best safety statistics in the entire DOE complex, including 7 million hours without a lost time accident. It helped employees to know of management's and DOE's commitment to safety and helped to develop a safe work environment.
Implementation & Effectiveness: Safety reward programs contributed to the project's overall safety record. A safe project is also a cost-efficient project. The project's excellent safety performance contributed to the projects favorable cost and schedule performance.
APPLICABILITY: <input checked="" type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

5.2 Organization and Administration

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Lessons Learned

Lesson: 5.2.1

Title: Maintain a Bias For Action

LESSONS LEARNED SUMMARY:

Management needs to establish a culture that encourages timely work completion--that emphasizes that the goal is not just safety but safely completing work. Processes and programs need to be fully compliant, safe, and have high quality--but all in the service of getting work done

DISCUSSION

Description:

Having a bias for action means having a propensity to act without customary analysis or complete information. It means to have a "just do it" attitude and contemplate your actions later. In a government contracting environment, decisions and actions often get bogged down in bureaucracy. Often too much time is spent analyzing an issue or waiting to get complete information. This often leads to inaction. To be successful in this business, decisions sometimes need to be made without a complete analysis or complete information. Otherwise nothing gets done. Obviously safety needs to be the first priority. But maintaining constant pressure to move forward safely is required by challenging the status quo.

As a good example, when asked to proceed with work on the vertical pipe units in the 618-10 Burial Ground, WCH had essentially completed the work before the contract modification adding the scope and funding could be completed. Similar approaches were taken whenever an employee called a time out to get clarification on a process being undertaken in the field: rather than a prolonged process, WCH immediately got the necessary people together, came to a resolution, ensured it was appropriately documented, and then got back to work.

The same attitude and approach was evident in how WCH dealt with the regulators. Numerous enhancements and safety improvements were introduced by bringing the regulators to the field to ensure they were thoroughly knowledgeable about any planned change in process. Changes such as agreements that hundreds of glass vials could be crushed as a single step rather than one-by-one was one example of working with the regulator. In some instances, it was also working to improve review and approval processes. In a joint LEAN review (a standard improvement methodology introduced by Toyota), WCH and the regulators streamlined a review process--reducing the number of iterations and reducing a form from 70 to 4 pages.

Much like the safety culture, the commitment to get work done--to having a bias for action--was one of the key elements of the WCH culture that helped make it successful.

In every aspect of our work, the goal was to get work done safely--but that meant getting it done.

Consequences / Benefits:

By maintaining a bias for action, WCH was able to complete the project on schedule and under budget with one of the best safety records in the entire DOE complex.

Implementation & Effectiveness:

WCH management had a "can do" attitude throughout the project. When progress slowed, management immediately took action to determine how to get the project back on track.

Lessons Learned

APPLICABILITY: <input checked="" type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____
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Lessons Learned

Lesson: 5.2.2

Title: Look For Appropriate Opportunities to Introduce Improvement Processes

LESSONS LEARNED SUMMARY:

The River Corridor Closure Contract was a cost and schedule incentivized contract. Costs were reduced and schedule was gained through process improvements.

DISCUSSION

Description:

Fairly early in the contract, Six Sigma and LEAN process improvement techniques were introduced. Several employees were trained in these techniques. At one point in the project, a concentrated effort was made to identify process improvements through the use of these techniques. Similar efforts continued throughout the project in a less formal and regimented manner. These efforts identified and implemented several process improvements over the life of the project.

Consequences / Benefits:

The process improvements identified and implemented through these efforts resulted in greater cost and schedule efficiencies, which, in turn, contributed to the current 10% favorable cost variance. The cost and schedule efficiencies freed up funds to do additional work.

Implementation & Effectiveness:

Several employees first needed to be trained in the use of Six Sigma and LEAN process improvement techniques. All employees need to become familiar with these techniques to help them identify appropriate process improvements. This required up-front cost, but cost savings that resulted from the process improvements more than offset the up-front training costs.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 5.2.3
Title: Quickly Respond to Changes in Conditions, Scope, or Funding
<p>LESSONS LEARNED SUMMARY: The contractor needs to maintain flexibility to respond to changes in conditions, scope, or funding.</p>
<p>DISCUSSION Description: There were many changes to conditions, scope, and funding throughout the River Corridor Closure project. The original contract was to demolish all 300 Area facilities. Later it was determined some facilities needed to be retained. This required a major change in methods for demolishing facilities in the 300 Area. Utilities needed to be rerouted for the retained facilities. The original contract included putting the K Reactor in interim safe storage. But, because of delays by another contractor in preparing the K Basins, interim safe storage of the K Reactor was removed from the contract. The original contract included remediation of the 618-11 Burial Ground. Because of delays in determining appropriate methods of vertical pipe unit remediation and funding constraints, the waste site was removed from the contract. A highly contaminated waste site was discovered under the 324 Building, which resulted in not demolishing the 324 Building. The volume of waste at several waste sites became much greater than originally estimated. Through budget cuts and Continuing Resolutions, DOE was not able to fund the project at levels originally planned. This required the contract end date to be extended.</p> <p>WCH was flexible enough to respond to all of these and other changes. The River Corridor Closure Action Team (RCCAT) process made it possible to reprioritize the work. Work scope could be added, deducted, deferred, or accelerated based on priority and funding availability.</p>
<p>Consequences / Benefits: Due to WCH's flexibility, it was able to respond relatively quickly to the many changes throughout the contract. Being able to quickly respond saved time and money.</p>
<p>Implementation & Effectiveness: Changed conditions often lead to safety issues, but WCH was able to respond to changes and still maintain excellent safety, cost and schedule performance.</p> <p>See also Lessons Learned 4.1, Implement a Means to Immediately Address Contract Baseline Changes</p>
<p>APPLICABILITY: <input checked="" type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____</p>

Lessons Learned

Lesson: 5.2.4
Title: Develop a Working Relationship with Personnel Assigned to Facility Oversight
LESSONS LEARNED SUMMARY: Establish strong relationships between project management and DOE facility representatives early and maintain throughout the project's duration.
DISCUSSION Description: Both DOE and the contract benefited from the facility representative oversight program. Establishing a strong working relationship at the start of a project was a key element for this relationship to be productive. Weekly meetings were scheduled to discuss work activities and resolve identified issues and concerns. Providing prompt feedback by both parties was essential to resolve issues and move forward. A complete understanding of the issue(s) was obtained to provide the most effective resolution.
Consequences / Benefits: Eliminates misunderstanding of issues, provides prompt resolution, and avoids conflict.
Implementation & Effectiveness: Implementation requires a solid endorsement and full commitment from project management and the facility representative. Regular reviews of issues and resolutions are required to ensure the effort maintains the appropriate level of support and progress.
APPLICABILITY: <input checked="" type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 5.2.5
Title: Provide In-House Labor for Maintenance and Operational Activities
LESSONS LEARNED SUMMARY: Maintaining in-house labor resources to perform maintenance and operational activities was critical to cost and schedule.
DISCUSSION Description: Throughout the contract, WCH maintained in-house labor resources to perform maintenance and operational activities rather than depending on site service providers of these services. Utilizing in-house labor resources to perform maintenance and operations activities allowed the project to customize resources, cost, and schedule to fit the needs of the assigned work scope.
Consequences / Benefits: Resources, cost, and schedule can be customized to fit the needs of assigned work scope.
Implementation & Effectiveness: Efficiencies were gained by maintaining in-house labor resources for maintenance and operational activities. In-house labor resources provided support when needed. There was no need to wait for outside services. This was more cost efficient and made it easier to schedule maintenance and operational activities. It allowed for more flexibility.
APPLICABILITY: <input checked="" type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 5.2.6
Title: Look For Opportunities to Make Organizational Consolidations
LESSONS LEARNED SUMMARY: The River Corridor Closure Contract was a cost-incentivized contract. To reduce management costs, WCH constantly looked for opportunities to consolidate organizations.
DISCUSSION Description: Over the life of the project, WCH consolidated Labor Relations with Human Resources. Training became part of Quality Assurance, and Procurement was combined with Contracts. The Interim Safe Storage Project was combined with the D4 Project. Work in the 100-D and 100-H Areas was combined under one project manager. Later, the Field Remediation Project was combined with the D4 Project to form the Closure Operations Project. WCH was also working toward combining Project Services and Project Integration.
Consequences / Benefits: Many cost efficiencies were realized through organizational consolidations whenever possible throughout the River Corridor Closure Contract. These consolidations contributed to the 10% favorable cost variance.
Implementation & Effectiveness: Organizational consolidations were only implemented when it became beneficial to do so. As the project progressed and the work scope changed, it became possible to consolidate some organizations. Management was constantly looking throughout the project for opportunities to consolidate.
APPLICABILITY: <input checked="" type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 5.2.7
Title: Integrate the Efforts of Project and Functional Organizations
<p>LESSONS LEARNED SUMMARY: A matrix organization can be a complex, difficult, and sometimes frustrating form of organization to live with because managers have to get results from people and components not under their direct control. There needs to be a balance of power within a matrix organization.</p>
<p>DISCUSSION Description: The WCH organization was a strong project management organization with weaker functional organizations. The functional organizations within WCH were project controls, safety, quality assurance, radiological controls, procurement, waste management, environmental, human resources, and administrative (document control, facilities, accounting). The project controls, safety, quality assurance, and radiological controls organizations embedded personnel from each of these functional organizations into the project teams. This arrangement served the projects well with one exception. The procurement specialists from the procurement department were not embedded within the project organization, which, at times, caused conflict between the projects and procurement. The procurement department should embed procurement specialists into the project teams.</p> <p>The River Corridor Closure Contract was a cost-plus-incentive fee (CPIF) contract with incentives structured to provide a strong financial motivation for the contractor to achieve a safe and efficient closure of the River Corridor. A strong project matrix structure provided the best organizational structure for this style of contract because the projects had a full-time project manager (PM) with a staff under him, and the PMs controlled the project budget. One manager responsible for the budget provided WCH with the best means to control cost.</p>
<p>Consequences / Benefits: Managers will find it exceedingly difficult to deal with the power struggles within a matrix organization. Equal strength between the functional and project managers will prevent struggles from reaching destructive heights. Managers in a matrix should push for their advantages but never with the intention of eliminating those with whom they share power, and always with a perspective that encompasses both positions. The matrix's most basic advantage over a line organization is that it facilitates a rapid response to changing conditions and technical requirements. Matrix organizations also provide greater flexibility for resource management.</p>
<p>Implementation & Effectiveness: Integration of functional organizations into project organizations requires cooperation of both functional and project management and the support of senior leadership for balanced power.</p>
<p>APPLICABILITY: <input checked="" type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____</p>

Lessons Learned

Lesson: 5.2.8
Title: Integrate Field, Construction, and Operations Support Functions
LESSONS LEARNED SUMMARY: Establish a field/construction/operations functional organization for work control, craft management, field subcontract management, field activities, and facility/equipment maintenance.
DISCUSSION Description: The WCH organizational structure included functional groups for safety, radiological controls, quality assurance, and project controls. No field/construction/operation functional group was established. The “how to” direction for field activities was provided by each individual project organization. This resulted in each project conducting field activities in different methods. While each project had successes with their methods, at times surveillances and audits identified these differences and movement of resources between projects required additional training. Establishing a functional group for the field activities would provide uniform implementation methods, improve resource sharing, and provide “care and feeding” for the field personnel.
Consequences / Benefits: Provide uniform “how to” direction across all projects. A field/construction/operation functional group eliminates duplicate organizations and consolidates management of resources. A field support organization would have brought consistency across the project, would have eliminated many redundancies, reduced similar forms and procedures used by the separate projects, and would have introduced efficiencies by sharing their resources and eliminated the need for additional training as employees were moved from one project to another.
Implementation & Effectiveness: Establish and empower a field functional organization at transition.
APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 5.2.9
Title: Establish a Central Field Office Location
LESSONS LEARNED SUMMARY: Establish a central field office complex location for the entire duration of a specific project location. Purchase mobile office facilities and establish permanent utilities if the project duration is greater than 24 months.
DISCUSSION Description: WCH had to establish multiple onsite office complex locations to complete the River Corridor Closure Contract scope, which resulted in numerous personnel relocations and mobile office mobilizations and demobilizations. A cost benefit analysis should be performed during the proposal to establish if an onsite project would benefit from one central office location or multiple locations. When the project schedule is greater than 24 months, mobile offices should be purchased rather than rented.
Consequences / Benefits: Establishing a central field office location reduces costs associated with office rental, temporary utilities, mobile office trailer relocations, and personnel relocations.
Implementation & Effectiveness: Include onsite office complex location planning during the proposal preparations to determine lease versus buy for mobile office structures. WCH had multiple site office locations during its tenure, with numerous leased trailers that were routinely mobilized and demobilized. A significant effort was required late in the contract to confirm the locations of all leased and owned trailers and to update documentation supporting what had become lengthy leases for the trailers that could be considered as having been more costly than had the trailers been purchased. See also Lessons Learned 2.5.4, Conduct Valid Leases vs. Buy Analysis
APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

5.3 Work Practices

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Lessons Learned

Lesson: 5.3.1

Title: Use Explosive Demolition for Elevated and Heavily Shielded Structures

LESSONS LEARNED SUMMARY:

WCH found that explosive demolition for the structures that met their demobilization criteria involving elevated structures and heavily reinforced/shielded facilities was not only cost effective, but mitigated additional safety concerns presented by utilizing standard demolition techniques.

DISCUSSION

Description:

Industrial safety, access, and equipment capability are the main criteria for choosing explosive demolition over conventional demolition due to the height of the structures and the construction techniques (e.g., cast in place, precast, thick members, location, heavy reinforcement) utilized for the construction of buildings or other structures (stacks, equipment pedestals). The explosive demolition also rubblizes building debris, allows for easy access to complete size reduction of the debris, and ensures that all parts of the building were dismantled.

Conventional demolition techniques require the inclusion of large excavators and high-reach excavators for extended periods, exposing personnel to industrial hazards that include unstable building conditions at the end of a working day, flying debris, equipment maintenance hazards, and extended exposures to heavy equipment. In addition, it reduces the number of individual workforce members exposed to industrial demolition hazards, reducing the chance of an accident. Finally, explosives do not require the use of or the costs associated with special machinery such as high-reach excavators.

Consequences / Benefits:

Explosive demolition reduces risk, minimizes size reduction efforts, reduces equipment wear and tear, and reduces schedule durations.

Implementation & Effectiveness:

Selecting managers and subcontractors with the right background and experience in explosive demolition are a must when selecting an explosive technique.

Demonstrated technical experience and substantiated results should be taken into consideration.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 5.3.2

Title: Utilize Monolithic Removal Practices For Highly Contaminated Structures

LESSONS LEARNED SUMMARY:

WCH took into consideration an integrated approach during the planning and implementation stages of the disposition of highly contaminated structures. The project planning and management teams integrated their demolition strategies with the final disposition of the contaminated structures. This allowed all affected parties to provide input and establish the best possible methods for disposal.

DISCUSSION

Description:

The River Corridor Closure Contract's 300 Area D4 Project included numerous facilities with significant radiological hazards (extremely high contamination and high dose rates). These facilities included hot cells, reactors, tanks, tank vaults, and large concrete hot cell structures. Conventional demolition techniques would have been too aggressive and resulted in significant personnel exposures and unacceptable airborne releases. Intact removal and shipping of tanks, reactors, hot cells, and one-piece monolithic removal of the larger concrete structures was utilized to minimize personnel exposures and airborne releases. Utilizing this approach also provided other benefits such as shielding for transportation and using the void spaces for co-disposal of similar waste streams.

Consequences / Benefits:

Using monolithic removal practices for highly contaminated structures reduces releases of radioactive material (airborne and contamination spread) and maintains worker exposure as low as reasonably achievable (ALARA).

Implementation & Effectiveness:

A combination of qualified and experienced engineers, management, and subcontractors, along with proactive communication with all parties involved, is required to overcome the challenges associated with one-piece monolithic removal and transportation of highly contaminated reactors, vaults, tanks, and concrete sections. If this demolition approach is chosen, management focus is a must at the beginning and throughout the project. These approaches need to be incorporated at the request for proposal stage of a contract due to significant effort and costs associated with demolition of these high radiological risk facilities.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 5.3.3
Title: Evaluate Existing Facility Capabilities in Planning Demolitions
LESSONS LEARNED SUMMARY: When planning building deactivation/interim storage of facilities that contain unique features (hot cells, reactors, high level tanks, and gloveboxes), fully evaluate the existing systems/equipment/structures (cranes, ventilation, roofs, special tools, etc.) of the facility for demolition uses prior to deactivating or removing these systems/equipment/structures.
DISCUSSION Description: During the deactivation and interim storage, a thorough evaluation was conducted of existing systems/equipment/structures (cranes, ventilation, roofs, special tools, etc.) for use during the stabilization, deactivation, and demolition process. When possible, existing equipment was evaluated for use prior to deactivation and removal. The deactivation/demolition plan identified what existing systems/equipment/structures were to remain active. Facility operations personnel were contacted in order to identify special tooling that was not included in the facility drawings or operating procedures.
Consequences / Benefits: When planning demolition, evaluate existing systems, etc., to avoid replacement of equipment and specialized equipment that is no longer available or one of a kind, and also reduce cost and schedule impacts.
Implementation & Effectiveness: Complete the deactivation/demolition plan prior to initiating facility deactivation and hazardous material removal.
APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 5.3.4

Title: Remain Aware of Requirements Governing Regulated Facilities and Operations

LESSONS LEARNED SUMMARY:

Regulated facilities need to be constantly aware of the regulatory basis and related operational parameters that govern operations.

DISCUSSION

Description:

Several months after WCH had completed transition, it was discovered that compaction testing at the Environmental Restoration Disposal Facility was not being conducted; in some instances, testing results were being falsified, and the leachate collection system had not operated properly. WCH took immediate action, identified the issues to the regulators, and corrected the issues. Regulated facilities need to be constantly aware of the regulatory basis and related operational parameters that govern operations. Operations management staff must be aware of these bases, and all other operations staff should have a general understanding of these so that appropriate performance assurance processes can be put in place and the importance of performing the routine tests, assessments and surveillances can be understood in the context of the integrity of the operation. From the list of regulatory bases and operational parameters (extensive in some cases) a subset of "critical activities" should be developed that warrant special attention in terms of added scrutiny in the form of surveillances, assessments, observations. The critical activity review should include an analysis of the operations personnel involved to ensure that the person is properly qualified, trained, and is provided the resources to perform the activity.

Consequences / Benefits:

Avoid regulatory compliance issues and potential penalties.

Implementation & Effectiveness:

When assuming responsibility of and operating regulated facilities, an in-depth review of critical activities must be completed at transition and be maintained throughout the project. Ensure a management plan including the level of oversight is sufficient to verify regulatory requirements are being implemented properly.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 5.3.5
Title: Incorporate Recycling Values Into Demolition Planning
LESSONS LEARNED SUMMARY: Demolition of nonradioactive facilities should incorporate recycling as part of the demolition process, particularly if the demolition is being performed by a subcontractor. The value of the recycled material can be utilized to offset the demolition costs by incorporating a recycle credit into the subcontract pricing documents.
DISCUSSION Description: WCH developed subcontract exhibits for commercial, quality, safety, environmental, and work control requirements that included a matrix to identify the applicable requirements based on the scope of the subcontract. The matrix was reviewed and approved by the applicable subject matter experts, and if a deviation from the requirements was requested, approval by the functional manager for the subject area was required. WCH was successful with utilizing this approach with no radiologically contaminated buildings and transformer substations.
Consequences / Benefits: Subcontracts that include recycling provide environmental sustainability and reduced costs.
Implementation & Effectiveness: Each functional organization shall be responsible to develop and maintain the exhibit for the subject area. The functional groups then must provide training on how to apply the requirements based on the scope of the subcontract.
APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 5.3.6
Title: Incorporate Appropriate Technical and Approval Processes During Reviews
LESSONS LEARNED SUMMARY: High-profile activities (heavy lifts, handling high dose/contamination, unique transportation or packaging, explosives, reactive chemicals, etc.) need to incorporate the appropriate technical and work approval processes (independent, senior management, startup reviews, independent design review [IDR], technical review group, etc.) into the schedule.
DISCUSSION Description: High-profile activities (heavy lifts, handling high dose/contamination, unique transportation or packaging, explosives, reactive chemicals, etc.) need to incorporate the appropriate technical and work approval processes (independent, senior management, startup reviews, IDR, technical review group, etc.) into the schedule. Early involvement by oversight groups is a must. If an IDR is required, the IDR team needs to be engaged at the 60% design stage and sufficient schedule time (2 to 3 months depending on complexity) needs to be incorporated into the schedule.
Consequences / Benefits: Appropriate technical reviews for high-profile activities increase confidence of the oversight groups, improves the project, and provides technical input from independent sources.
Implementation & Effectiveness: When developing the baseline schedule, incorporate the appropriate review process. Activities with high risk need to be evaluated for the type and timing of the review(s).
APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

Lessons Learned

Lesson: 5.3.7
Title: Do Not Rely Solely On Facility Records In Work Planning
LESSONS LEARNED SUMMARY: Operating records for facilities cannot be relied upon.
DISCUSSION Description: During the demolition of the 340 facility underground waste tank vault, a leak to the underlying soil was identified with radiation levels as high as 17 R/hr. During the deactivation of the 324 facility, a leak from the B-Cell to the underlying soil was found with radiation level as high as 12,000 R/hr. Neither of these facility records contained information identifying that leaks to the underlying soils had occurred. Operating records for facilities that handled high-level wastes (hot cells, vaults, gloveboxes, test reactors, etc.) cannot be relied upon. An evaluation/investigation of potential leak paths (sumps, embedded/underground systems, shielded/ fixed areas, etc.) needs to be considered and pursued early in the planning stages.
Consequences / Benefits: Evaluations and investigations rather than relying on operating records increase the safety envelope, and can avoid late design/approach changes, eliminate schedule delays, and eliminate unknowns. Identify/ eliminate risk.
Implementation & Effectiveness: Complete the deactivation/demolition plan prior to initiating facility deactivation and hazardous material removal.
APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____

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6 Work Performance

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Lessons Learned

Lesson: 6.1

Title: Begin Closeout Well in Advance of Completing the Contract Scope of Work

LESSONS LEARNED SUMMARY:

Recognizing that closeout planning and implementation could be performed prior to the end of the River Corridor Closure (RCC) Contract was key to ensuring WCH contract closeout success. WCH recognized the importance to an early start on closeout activities; and resources were dedicated to developing action items, initiatives, and target schedules for pre-closeout preparations. Senior management and client support and participation was key to ensuring that there were adequate resources and support to complete early initiatives.

DISCUSSION

Description:

The RCC Contract encouraged WCH to maximize cost and schedule into the contract closeout stage of the contract. In keeping with these drivers, contract closeout activities were identified several years in advance of completing field work as an area of focus. The senior leadership team recognized the value (time, cost, reputation) of achieving a quick closeout. The ideas for achieving that goal were communicated to the WCH Board of Managers, and with their endorsement, WCH initiated discussions with DOE.

An initial closeout team, composed of a half dozen WCH personnel, completed work on a set of reviews with each of the functional organizations, resulting in several initiatives and a publication titled "Taking Closure to the Next Level" (WCH-538). This group identified long lead-time activities and deliverables that needed to be addressed. In addition, this team worked to recognize the resources, stakeholders, and logistics necessary to ensure a timely closeout. This resulted in several discussions, core reviews, and staffing initiatives.

Shortly before the work of this team was completed, a manager was brought in with the express purpose of defining a more precise and streamlined path to closure. This phase focused on managing personnel, closing core business operations, and identifying customer deliverables. These initiatives prompted the development of several closure and disposition plans, additional DOE customer interfaces, and integrated panel discussions between WCH and DOE to determine specific closeout deliverables.

As a result of these discussions, the Contract Avoidance Plan was developed. The basic principle of this plan was to identify and complete action items required by the contract before the end of the contract period of performance. This plan identified the subject matter experts for both WCH and DOE, the actions associated with contract closeout, and the specific deliverables identified to meet contract closeout expectations. This plan was jointly owned and maintained by DOE and WCH, which ensured that continuous communication and progress was being statused accurately.

All parties recognized the benefits to open and transparent discussions with regards to requirements, interpretation, potential roadblocks, and deliverables. This approach ensured early agreement between WCH and DOE on what actions constituted closure and what could be done in advance of the end of the contract period of performance.

Consequences / Benefits:

Cost and schedule are the primary benefits to establishing work-off curves for long lead-time items in the core business functions prior to the closeout office.

Getting an early start on closure meant that resources and expertise were still available to help expedite the required deliverables.

Prior planning identified specific areas that were either lacking in resources, or established problem areas

Lessons Learned

that needed advanced agreements established.

Implementation & Effectiveness:

Implementation requires agreement between the contractor and the client as regards what constitutes closure and the willingness to engage early in the process of completing those tasks. Working closeout activities and project deliverables in concurrence is not a standard methodology and can be met with resistance if there is not project and customer buy-in from the top down.

Creating an expedited contract closeout model gained traction internal and external to the project, and there are many interested parties watching to see if this process will become the new standard contract closeout model. The overall effectiveness of the effort is determined by the duration of the closeout process.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) Corporate Entities

Lessons Learned

Lesson: 6.2

Title: Go Beyond the FAR Requirements in Defining the Scope of Closeout

LESSONS LEARNED SUMMARY:

The Federal Acquisition Regulations (FAR) establish a clear-cut list of activities that are required by a contracting officer to satisfy closeout of a major prime contract (FAR 4.804.5, "Procedures for Closing Out Contract Files," and the associated checklist, DD Form 1597, "Contract Closeout Checklist"). There are also good guidance documents available to support these actions (e.g., the Defense Contract Management Agency [DCMA] "Contract Closeout Guidebook"). However, assuming that this list represents the full picture of what has to be accomplished could greatly understate the scope and the time needed to achieve the contract closeout.

DISCUSSION

Description:

One of the first steps involved in pursuing an accelerated and efficient closeout was coming to agreement with DOE on what was required. Although the FAR requirements were well known, they consist of approximately 15 high-level activities that, depending on the nature of the contract, may have or may not have applied (e.g., WCH did not have any patents, classified information, or royalties to be paid.) Of the items that did apply to the contract, each was composed of numerous subactivities. For example, "property clearance received" entailed several categories of property--real, personal, vehicle--each with their own set of requirements and completion documentation.

To get a handle on the subactivities, WCH embarked on an iterative process that entailed close coordination with DOE. As a first stage, WCH developed a matrix that indicated all the major functions and the principal subfunctions (e.g., included under finance were payroll, accounts payable, banking, property accounting, incurred cost reporting and audit response, financial reporting, and fee invoicing). Then, through a series of meetings, the following were identified: WCH and DOE counterparts; the strategy to be used for minimizing the duration of the closeout office (i.e., looking for streamlining opportunities and opportunities to complete activities in parallel with completing work scope rather than doing subsequent to the finish of work scope), opportunities for collaboration with DOE; and, finally, the closure documentation (and any specific/additional requirements) needed to declare the action complete.

This preliminary matrix, called the "Closeout Office Avoidance Plan," was then refined and amplified through a number of collaborative meetings--beginning with a partnering session among the DOE and contractor senior management teams at which an agreement was reached, the stated mission of which was the following: "WCH and DOE have a mission to complete the closure of the Hanford River Corridor by 2015. Early and efficient completion of this work scope in accordance with the River Corridor Closure Contract (DE-AC06-05RL14655) represents mutual success for the Partnering Team (WCH and DOE-RL)."

This step, in turn, led to a large meeting in which all the functional counterparts from DOE and WCH were assembled to hear direction from the DOE-RL Assistant Manager and the WCH President, committing to the coordination and goal of a timely closeout of the project and to mutual cooperation to examine all avenues that could contribute to that success. Over the next months, more detail to the plan was added, assisted by a set of meetings facilitated by the the DOE-RL contracting officer in which functional counterparts got together, discussed streamlining activities, agreed to the required documentation and deliverables, and signed up to the Closeout Office Avoidance Plan.

Without each of these steps and the wholesale endorsement of the effort by senior management on both sides, it is unlikely that the closeout office project and the commitment to an accelerated closeout could have been accomplished.

Lessons Learned

Consequences / Benefits:

Having the contractor and the client in agreement at the early stages about what constitutes the required documentation and deliverables allows the closeout to proceed in a linear fashion--eliminating the potential for incorrectly assuming that both parties are in agreement. Having this "contractual" basis for moving forward also places all activities in a higher context and lessens the idiosyncratic or personality-driven decisions that can derail any project that has a large number of independent functions and offices, each of which has to agree that the scope has been accomplished.

Implementation & Effectiveness:

As noted, implementation requires a series of communications and coordinated meetings in which all potential participants are given the same set of goals and expectations. These then must be translated into formal assignments, with the appropriately assigned accountability and authority. As noted in other Lessons Learned, this means establishing a formal schedule, metrics, and reporting regime.

The effectiveness of the program can only be gaged by monitoring performance against expectations and by the involvement of senior management in keeping things on course--both in terms of people's commitment to the project's success and in maintaining the established course, with limited changes in schedule and essentially no changes in the established set of documentation and deliverables. To this end, in WCH's case, the Closeout Office Avoidance Plan was placed under controlled distribution, with changes only authorized when approved by the senior management.

APPLICABILITY: DOE

DOE Contractors

Other (Explain) Applies potentially to all large dollar FAR-based prime contracts

Lessons Learned

Lesson: 6.3

Title: Identify and Ensure the Availability of Knowledgeable Personnel

LESSONS LEARNED SUMMARY:

Contract sequencing of activities is a critical part of contract scope completion success. Closeout of prime contracts are typically left to be addressed at the end of a contract and performed with whatever resources are available to complete the required activities. If contract closeout activities were addressed prior to the final stages of contract completion, the time and resources to complete closeout activities could be leveraged to maximize cost savings.

DISCUSSION

Description:

Contract closeout activities are required at the conclusion of every major contract. These activities ensure that due diligence has been performed, and contractual obligations have been met. Typically closeout activities are funded and resource loaded at the end of a contract; however, the scope and required resources are generally not fully defined until just prior to entering the closeout process. Rather, general projections assume that what is needed are "some" finance personnel, some human resources personnel, maybe some procurement personnel, and then assorted other disciplines. The problem that arises is that by the time this generalized impression is crystallized, many of the key resources (the specific individuals needed) are no longer available: they have left or been released from the project.

If contract closeout actions were integrated into base scope activities, prior to the final stages of contract completion, personnel resources could be more effectively utilized to manage critical closeout functions. Working closeout activities concurrent with the completion of the project, thus avoiding/minimizing the need for a closeout office for a long period of time, has the potential to address closeout deliverables with project personnel who have the greatest familiarity with the subject matter.

One of the long lead-time issues of closing out contract deliverables is not having the project subject matter expert available to address the questions and emerging deliverables in a closeout office. This is due to them already being reassigned once the field work has been completed. However, if closeout activities and field work completion activities were worked concurrently the resources would still be available.

In addition to having the most knowledgeable personnel resources available to address closeout issues, integrating closeout scheduling activities during the base period of performance creates a process to identify and address long lead-time items, resource needs, and cost estimates for remaining contract closeout activities.

Consequences / Benefits:

The benefit to working closeout office activities prior to the start of a closeout office is maximized personnel resources, reduced closeout office costs, and a reduction in closeout office duration.

An unintended benefit to performing advanced contract closeout activities is the appeal to the customer of potential cost savings, advanced discussions on closeout deliverables, and the reduction of contract closeout durations.

Implementation & Effectiveness:

Early on in the process, personnel who are assigned closeout-related activities will be doing these jobs as ancillary assignments. Efforts need to be made to balance the closeout office work with other assignments and to also maintain a balance when it comes to recognizing people for their work. Shifting the balance too far--either toward closeout or toward the general work assignment--can result in frustration and also be incorrectly interpreted as management sending a message about a lack of support for one side or the other. Finally, as the closeout period approaches (no further out than 6 to 9 months from completion of the contract scope), a dedicated organization should be established to support closeout. Overall effectiveness will be

Lessons Learned

evident based on performance against the established closeout schedule and metrics.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) Corporate Entities

Lessons Learned

Lesson: 6.4

Title: Establish the Funding and Closeout Office Categories of Cost Well in Advance of Closeout

LESSONS LEARNED SUMMARY:

Two primary methods may be used to establish the scope and costs for the closeout office: 1) a new Cost Line Item Number (CLIN) may be established in the base contract, or 2) a separate Advanced Agreement on Cost may be established. In either situation, a clear understanding between the contractor and the agency must be delineated that makes certain the categories of costs that will be allowable, the limits on those costs, durations, invoicing mechanisms, and approach to be used if unanticipated situations/costs arise.

DISCUSSION

Description:

Irrespective of the method used to establish the closeout office, careful attention must be paid to ensure that the contractor and authorizing agency have a mutually shared understanding of precisely what costs are to be incurred, which are allowable, any stipulations/limitations, and any agreed-to aspects of the operation that will be different from those employed during the tenure of the base contract. For example, at WCH, a separate Advanced Agreement on Cost was established that required several iterations before agreement was reached on such considerations and costs as the following:

1) Benefits. With the scope being completed, the contracting officer did not want any benefits (e.g., pension, long-term disability) that could create a continued liability extending well beyond tenure of the closeout office. This issue required negotiations to ensure benefits for the closeout office were equitable and reasonable so as to secure the continued employment of personnel critical to achieving the effective closeout of the contract. There also were protracted discussions to determine how to deal with those individuals already on short- or long-term disability.

2) Operational activities. Most routine costs (e.g., costs for a building lease and associated infrastructure costs) remained governed by the Federal Acquisition Regulations (FAR), but numerous factors needed advance agreement. For example, factors such as travel, corporate support, support to be secured on work orders from other contractors, medical services, and insurance and fees all needed to be negotiated.

3) Costs to be charged against the base contract target cost and fee. A major component of the costs to be incurred subsequent to completing the base scope of work was the negotiation of remaining requests for equitable adjustments (REAs) and the negotiation of the final cost share incentive. Although many reasons contributed to the outstanding REAs requiring work extending several months into the closeout office period, the contracting officer determined these costs not to be closeout costs, but, rather, costs to be charged against the base target cost and target fee. This determination, which was not evident until well into the discussion on the Advanced Agreement on Cost, had a substantial impact on not only fees to be earned, but also in additional administrative burdens on the closeout office in such areas as cost collection and reporting.

4) Policies and practices no longer applicable. What aspects of the base contract were no longer applicable also needed to be identified--for instance, leasing of the office space for the closeout office did not require facility management approval from DOE, and safety and performance reporting was significantly streamlined. At the same time, certain site policies--such as adjusting work hours during extreme weather conditions--did not apply, thereby making such costs unallowable for the closeout office despite being allowable for all others working directly or indirectly for DOE.

5) Other considerations. Other issues related to the closeout of the office also required negotiation--e.g., pension funding liabilities and transition, whether or not an incurred cost report would be required for the closeout office, continued use of the letter of credit, and whether a separate and formal cost proposal would be required to establish the cost and staffing of the closeout office.

Although it was anticipated that closeout would run as a smooth continuation of the existing contract, WCH learned that securing all the necessary agreements was a protracted activity that required a series of meetings before a formal agreement was signed between WCH and DOE. As it was, the signing of the agreement was not completed until well after the closeout office was set up and costs were being incurred--a

Lessons Learned

step that required a contracting officer letter authorizing such costs in advance of completing the final agreement.

Another issue to be resolved was what elements of cost should be charged to base target cost and which would be part of the new target cost for the closeout office. After several rounds of discussions, it was agreed that costs such as completing the negotiation of REAs would be part of the base target cost since they represented items that the DOE contracting officer maintained should have been completed prior to opening the closeout office.

Consequences / Benefits:

Having a clearly defined advanced agreement on costs, as with the use of such a document in the base contract, allows for proceeding with work without having routinely to validate with the contracting officer what costs are allowable and allocable to the closeout office. Without such an arrangement, activities that might seem routine or assumed as allowable could be declared unallowable.

Implementation & Effectiveness:

Developing the Advanced Agreement on Costs began with all the organizations who would be represented in the closeout office getting together to discuss all the potential categories of cost. These meetings included representatives from finance, procurement, human resources, information technology, project controls, internal audit, legal, labor relations, operations support, training, and safety. In the first iteration of the Advanced Agreement, all the identified potential categories of cost were included. Through a series of meetings with the contracting officer, the document was greatly simplified (e.g., detailed discussions of each of the anticipated categories of office supporting infrastructure costs were replaced by a single sentence: "Reasonable facility lease costs for 723 The Parkway, Richland, and those costs associated with the operation of the office (e.g., copy machines, office supplies) are allowable."

Over the tenure of the closeout office, the value and effectiveness of this advanced agreement was clearly evident in that all invoices were accepted and paid with a minimum of discussion or required clarifications.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) Applies potentially to all large dollar FAR-based prime contracts

Lessons Learned

Lesson: 6.5

Title: Take a Phased Approach to Closing Out the Contract Scope of Work

LESSONS LEARNED SUMMARY:

The process of closing out a contract usually segments activities into two categories: 1) the physical work scope prescribed in the contract and 2) the activities associated with closing out the contract once the work scope is complete. This thinking can contribute to stretching out the time needed to close the contract because having agreement with the client that the physical work is complete is a precursor to negotiating much of the closure process. As noted in FAR 4.804-5, "Procedures for Closing Out Contract Files," one of the required components is "documentation that all work is documented as complete." Waiting until 100% of all work is complete to start this documentation process can lead to protracted discussions between client and contractor--who may have differing opinions as to what precisely constitutes complete for each and every aspect of the project.

DISCUSSION

Description:

Early on in the WCH project, it became quite clear that demonstrating fulfillment of all remediation activities (500+ waste site remediations, 300+ building demolitions, completion of 50+ regulatory milestones) was going to be a massive undertaking. To address this potential problem (which would likely be exacerbated by personnel changes likely to occur over the project's 10-year duration), several key actions were undertaken. As a first step, matrices were developed demonstrating how safety, environmental, and quality requirements were being addressed in both self-performed and subcontracted work.

These matrices were complemented by milestone dictionaries that detailed the expectations for each building to be demolished (e.g., whether work was required down to the slab, slab removal, or below-ground cleanup). At the same time that this milestone dictionary was being reviewed with and approved by the client, an equally important dictionary was developed to track the requirement of each of the Tri-Party milestones (legally enforceable milestones developed in coordination among the DOE, the Washington State Department of Ecology, and the U.S. Environmental Protection Agency). Milestone completion logs were maintained that detailed the milestone, when completed, the correspondence documenting the completion, and the dates and descriptions of any negotiated modifications made to the milestone subsequent to the original expectation.

These means of documenting completion of each subset of the overall work scope was then translated into a larger strategy. Rather than having to wait for the entire 200 square miles to be remediated, WCH gained approval from the regulators for a segmented approval: essentially, the remediation was divided into 10 definable and discernible areas. These areas represented locations as large as 53 square miles and as small as 2.3 square miles, with anywhere from more than 100 waste sites and facilities to be remediated to areas with as few as one waste site and one facility.

Over the course of several years, as all remediation of an area was completed, the supporting documentation was prepared and the required approvals by the regulatory agencies completed. The result was that with the completion of the last area came the final set of documentation.

Had all the areas been processed in a single approval package, it is likely that the signoff would have been several months long, complicated by questions about activities dating back through all periods of the contract. In comparison, the final documentation signoff was only a few weeks.

Consequences / Benefits:

Although in many cases it will be inappropriate to try to subdivide work scope into segmented parcels, where it is possible, the approach can be very beneficial. Not only do the smaller segments allow for a less complex review, they also avoid the risk of losing key resources who may be needed in the negotiation, and provide

Lessons Learned

easiest access to relevant information and documentation.

Implementation & Effectiveness:

The key factor in promoting a segmented approach to closing out the contract work scope is the degree to which work is subject to being examined and evaluated in discrete pieces. Just as construction projects are looked at in terms of critical decision steps, contractor and client need to be able to partition off segments so that there is no overlap between them; any overlap will add to the complexity of the completion determination. The approach must also have a clearly defined understanding of precisely how completion of each segment is defined, and a process established that precludes reopening discussions once a segment is declared by all to be complete. (As an example, national remediation standards [i.e., CERCLA, RCRA regulations] may change during the course of a contract. Without agreement on the terms of completion, such changes could introduce arguments over whether further remediation is needed in an area that had already been declared as complete.)

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) Applies potentially to all large dollar FAR-based prime contracts

Lessons Learned

Lesson: 6.6

Title: Implement a Plan to Close Out Field Support Functions

LESSONS LEARNED SUMMARY:

Certain functions entail activities that are pre-scheduled and, therefore, will continue unabated unless a specific action is undertaken to evaluate the right plan for bringing the function to closure. For instance, training will continue to be scheduled, even if the individual's qualifications may already be effective beyond the date that the function will be needed; equipment may have leases that are longer than needed; and warehouse supplies may be on a standard reordering time frame that would have stocks exceed the volumes needed for the remainder of the project.

DISCUSSION

Description:

WCH made a thorough assessment of all areas where particular action was required to terminate a cost or function. Among the areas of success were training, equipment leasing, and the warehouse.

The warehouse was a key attribute in signaling that the project was entering a closeout period. The warehouse personnel (principally union members) were given the assignment to take a strategic look at stocking and inventories. They developed a plan that reduced purchases during the last year to 18 months so that all inventories would be exhausted at the end of the contract. While some just-in-time replaced stocking, in other areas, the volumes already on the shelf were evaluated against historical data to determine precisely the volume needed. For example, winter clothing inventories were reduced to essentially zero after the final winter. This action also allowed for tearing down large portions of the warehouse shelving in anticipation of ending the facility lease. The reason the warehouse became so important was that whereas WCH could talk conceptually about progress toward closeout, the warehouse was the visible demonstration of the progress. Management (including senior management) was taken on tours of the warehouse, photos were routinely distributed within the project, and the initiative of the union personnel was used as a prime success story.

Similar successes were achieved in such areas as training and equipment. Approximately a year in advance of entering the closeout period, training requirements for all remaining personnel were evaluated. Where feasible, training was canceled to reduce the costs of training that would extend personnel credentials beyond the period of performance. As part of this effort, WCH worked with the other prime contractors who would be receiving represented personnel based on the site seniority system to ensure the individuals who would need to retain their qualifications were not adversely affected.

In this same manner, WCH worked with the other site contractors to disposition major equipment as it was no longer needed. Major pieces of equipment (such as excavators) were transferred when the waste site remediation activities were complete. These transfers not only aided WCH in preparing for final property dispositions, but also saved the government considerable funds based on making equipment available to other activities on the site.

Consequences / Benefits:

Having a plan and implementing it allowed for significant savings to the project for services, equipment, or supplies no longer required to complete the scope of work. In the case of training, there was also the added benefit of reducing the amount of time personnel were away from their assignments receiving training. Designing a planned termination of all functions was critical to promoting an expedient closeout of the project.

Implementation & Effectiveness:

Achieving an effective closeout of functions is contingent on early planning and worker engagement. It is often more difficult to end a function that has built-in controls that keep it going (e.g., inventory management controls) than to secure a business function that simply ends when the last action is completed (e.g.,

Lessons Learned

accounts payable). Therefore, what is needed is a plan that aligns the termination with field activities and then examines all the attributes involved (e.g., canceling supplier contracts). These actions coupled with taking great effort to recognize, reward, and communicate progress is what ultimately produces success.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) closure contracts

Lessons Learned

Lesson: 6.7
Title: Develop Work-Off Metrics Specific to Closeout
<p>LESSONS LEARNED SUMMARY: Closeout demands a change in focus for all support functions and operations. New metrics are needed, both to track the movement of the support functions toward closeout and for the functions to reorient the thinking from continued operations to completed operations.</p>
<p>DISCUSSION Description: At WCH one of the first steps in transitioning to closeout was to develop metrics for the business functions that would track progress towards completion. Each function was tasked with developing these work-off metrics. Examples included reductions in classroom training, reduction in facility footprint (both leased and owned), redeployment of Information Technology (IT) hardware, disposition of software applications, placement statistics, closeout of procurement files, archiving of records, and reduction in accounting volumes. Each of these metrics was tracked, with routine reporting of progress and issues to the senior management.</p> <p>Complementing these metrics was the need to reorient the projects. Monthly performance meetings had always been a component of the project. These meetings reported on dozens of metrics pertaining to safety, quality, and management activities. Over the course of the contract, these metrics had remained somewhat standard--with little adjustment to the metrics or their reporting. Several rounds of discussions were required to start the transition to closeout-related metrics. The first, and easiest, was the progress toward closeout and transfer of land to long-term stewardship. Then each of the performance areas began to get on board, with metrics such as closing out all actions in the corrective management system; completing all radiological reporting; eliminating vehicles; completing final ES&H reporting; eliminating audits that--given the remaining life of the project--would not translate into any improved performance; and completing final training requirements.</p> <p>Combining the new metrics from the functions with those of the projects then became the focus of the final series of performance meetings.</p>
<p>Consequences / Benefits: Aligning all metrics so that they shared a common orientation contributed to a better alignment of all resources in pursuit of a timely and cost-effective closure of the project. The metrics also were invaluable in communicating the unity of purpose to all project personnel. Without taking this step, closeout still would have been reached, but the coordination of efforts and focus would have been lost.</p>
<p>Implementation & Effectiveness: Metrics need to be developed that all align with the path forward. In this case, changing all metric from ones that tracked a continuous set of activities or values to metrics that showed work-off of project and functional activities was essential. In each case, the metric was evaluated in terms of how effectively it communicated a clear path to closure. A key factor was also management involvement. The performance meetings were used at first to critique the metrics and to identify additional potential metrics. Thereafter, all personnel who owned the metrics were involved in the performance meetings, creating a greater solidarity among everyone who had an active role in bringing the contract to closure.</p>
<p>APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____</p>

Lessons Learned

Lesson: 6.8
Title: Assess Outsourcing Options Well In Advance of Closeout
<p>LESSONS LEARNED SUMMARY: As part of the close out of a contract (particularly if the contract is a closure contract), there may be plans to transition certain functions, such as accounts payable or payroll, to another contractor or to a parent corporation. However, such options need to be evaluated far in advance of closeout to ensure that the capabilities exist, that the receiving organization is prepared to administer the functions, and that other issues (such as compatibility of software) do not preclude the transfer.</p>
<p>DISCUSSION Description: At WCH, one of the key steps in planning was to determine whether to continue to perform all support and business functions until final closure of the project or to transfer certain functions as the volume of activity significantly decreased. Making these determinations and decision points were factored into the schedules. In one instance (i.e., accounts payable and receivable) metrics were developed to track volumes to support these determinations. However, in almost all cases, it was finally decided that the transfers could not be effected and that the work would continue to be self-performed.</p> <p>The reasons were various: 1) Cherry picking--several human resources functions were planned for transfer to another prime contractor. Discussions and planning were well under way. However, the contractor subsequently identified certain aspects of the various functions that they wanted. The consequence was that functions would be fractured but WCH would still have to maintain staffing equivalent to that on board to administer the remaining components. 2) Priority and support--some functions (warehousing, information technology support) were on the docket for transfer to another prime contractor. In working through the detail, it became evident that, although the functions could be absorbed, the services might not be available on a priority basis, or, potentially, be unavailable when needed. Although there were some potential reductions in cost associated with reduced staffing, the functions were determined to be too vital to allow any reduction in support. 3) Resources--plans to transition certain functions (e.g., payroll) to parent companies also did not work out as planned. The corporations could not take on the added scope without additional resources, but such actions were not justified by the short-term duration of the service needs. 4) Cost--transferring functions did not always translate into reduced costs. For example, the proposed cost for procuring such services as janitorial far exceeded the existing costs.</p>
<p>Consequences / Benefits: Taking the time in advance to evaluate options for transferring services is essential to ensure decisions made are in the best interest of the project. Had projections been made without the full analyses, cost, schedule, and performance might all have been jeopardized. Even if some transfers are potentially beneficial, aligning the timing and coordinating with the field is essential. There is real potential for taking actions that benefit one organization (e.g., reduce the cost of a particular business function), but, in turn introduce additional cost or burdens on the field organizations.</p>
<p>Implementation & Effectiveness: The key is to conduct early analyses of what functions might be suitable for transfer. Although approaching transition may suggest that staffing reductions or other cost-cutting options should be implemented, each of these actions deserves the equivalent of a conscientious make-versus-buy analysis. Only if the conclusion is that the action will best serve the project and will not diminish critical support should the transfer be undertaken.</p>
<p>APPLICABILITY: <input type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input checked="" type="checkbox"/> Other (Explain) closure contracts</p>

Lessons Learned

Lesson: 6.9

Title: Establish a Tangible Definition of End Points

LESSONS LEARNED SUMMARY:

A significant component for WCH to be successful on the River Corridor Closure Contract was defining internally and externally the definition of completion. Defining completion scope and those activities that were associated with each task was critical for other organizations to establish their schedule and baseline activities. In addition, it was essential to establishing and defining scope completion with the customer was essential so that deliverables could be defined and a resource-loaded schedule established.

DISCUSSION

Description:

WCH went through a series of exercises internally to their operations. These exercises clearly defined project scope completion and what its definition of "done" was. This allowed the functional organizations to establish their end of contract closeout activities and needed resources, which were hinged on the project completion dates and activities.

Having this comprehensive discussion that captured the integration of completion activities and action items allowed WCH functional organizations to perform several detailed analyses and identify those activities that may have long lead-time actions associated with closeout. It also allowed the core business functions to establish work-off curves, per-closeout punchlists, and identify closeout avoidance activities that could be completed prior to the end of the base contract.

By establishing tangible completion definitions and end points, WCH had the ability to identify and work off actions that are typically assigned to be performed in a closeout office environment. Having completion actions defined by the customer and project personnel allowed the functions to pull back scheduled closeout activities while the resources were available, which reduced the duration and resources needed to complete the task.

Consequences / Benefits:

The benefit to having clearly defined completion criteria was the ability to communicate these expectations internally between dependent projects and functional organizations, as well as keep the customer focused on the mutually-defined scope of work. This allowed WCH to adequately plan its resources as well as work towards early completion milestones.

Implementation & Effectiveness:

What allowed for this process to be effectively implemented were the exercises performed by the core business functions that established completion triggers. These project completion triggers established tangible requirements for functional completion activities as well.

Additional exercises that revisited scope completion, necessary requirements, and compliance activities allowed the core business functions to better adjust to potential project scope changes.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 6.10

Title: Run Closeout as a Project

LESSONS LEARNED SUMMARY:

Core business functions are typically the last items to be closed out on a contract. Most of the resources assigned to support core business functions typically perform activities that are routine and ongoing. While this skill set is essential to ensure that the project runs smoothly, it is critical for a successful closeout avoidance to introduce project management principles into the day-to-day activities of the functional organization.

DISCUSSION

Description:

WCH created the work breakdown structure to have clear field and functional roles. This is typical of most project models, and is a very effective way to manage performance and resources. However, functional organizations tend to associate their work scope with ongoing routine activities and with the day-to-day operations of the organization.

For a closeout avoidance to be successful, it is critical that those actions associated with advanced closeout activities are captured, assigned, and tracked for progress. Assigning a project manager to those functions and actions associated with closeout is a very effective way to ensure that there are adequate resources and interfaces to ensure success.

WCH found that functional organizations were already tasked with the day-to-day deadlines and issues associated with running the company. When asked to perform additional tasks associated with the termination of core business functions not only were they not familiar with the request, but it was not given the priority necessary to accomplish an advanced closeout of long lead-time activities.

This was no surprise given that emerging issues and ongoing requests to keep the core business functions operational took all of the resources associated with the company already.

Creating a project model for closeout activities establishes specific action items with assigned durations. Assigning a project manager to run this model, establish priorities, resources, and report back to the senior leadership team validated the priority of the activity and set the tone for managing closeout activities.

Consequences / Benefits:

The consequence of establishing the core business functions as a project meant that the personnel who participated in these functions had to condition themselves to think in terms of an end date and what the project looked like "the next day."

Additional resources had to be identified to support long lead-time items in procurement and records management.

Managing the core business functions like a project gave employees an opportunity to work closeout activities during the period of performance, which allowed them to gain experience in this area and also gave the senior leadership team a better understanding of what the core business functions did to "keep the lights on" for WCH.

The process provided a secondary unintentional benefit of streamlining core business operations. Each department implemented mini LEAN process improvement actions when they identified an action item as a duplication or not necessary to performing their routine work scope.

Implementation & Effectiveness:

What was necessary to effectively implement this methodology was a project manager who had a strong

Lessons Learned

familiarity of the core business functions, who was respected by the senior leadership team, and who had strong project management skills that could bound the core business functions as a project.

Investing in adequate resources to perform the upfront planning and execution was key to being successful.

Creating an environment that integrated all of the core business functions to ensure that resources, schedules, and necessary action items were identified was another key contributor to ensuring success.

Establishing a P-6 schedule was critical for establishing and tracking all actions associated with closing core business functions.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 6.11

Title: Identify Potential Closeout Critical Path Items

LESSONS LEARNED SUMMARY:

Once closeout office action items have been identified, key to performing an analysis is to evaluate what the projected duration of completion will be. This action is predicated on knowing how soon you can start working on these action items and their backlog.

The sooner resources and deliverables are associated with those items that typically extend the duration of a closeout office, the sooner the contract can be closed out.

DISCUSSION

Description:

WCH performed several exercises to identify items that had long lead times for completion and that had been recognized during other contract closeout activities as areas that should be addressed. Among these items were completing the independent incurred cost audits for all years of the project, completing negotiation of requests for equitable adjustments, reaching a settlement for all questioned costs from subcontractor allowable cost audits, archiving procurement files, disposition of property, and disposition of records. Once those action items and deliverables were identified, WCH performed an analysis to see what the duration for completion would be in the best and worst-case scenarios, and what type of resources would be available to compete the tasks.

This thought process led to multiple exercises to establish what options were available to WCH to ensure that these actions were performed with an expedited closeout office concept in mind. WCH dedicated the time and resources towards those items that could be performed in-house and established methods to work of known backlogs of materials and closeout items.

In addition to addressing the in-house activities they also identified those actions that the customer (DOE) controlled. Incurred cost audits, for example, were several years away from being successfully performed by the customer, and there was no immediate relief in sight. This prompted WCH to approach DOE and request that they hire an accepted independent contractor to perform these audits to ensure that there were no fundamental issues in the later years of the contract.

Consequences / Benefits:

The benefit to performing closeout actions as early as possible in the final stages of the contract allowed WCH to utilize the knowledge, skills, and abilities of the existing workforce to work off the backlog and long lead-time items before the personnel were no longer available.

This process significantly reduced the closeout office cost and duration.

A consequence to an early closeout completion would be whether or not closeout office duration is a cost benefit, based on contract terms and conditions.

Implementation & Effectiveness:

Long lead-time items must be identified early in the closeout planning stages of a contract, deliverables must be quantified, and work-off curves established to ensure effectiveness.

Establishing metrics to track backlogs and dedicating resources to resolve audit issues are critical for the success of the deliverables.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

Lessons Learned

Lesson: 6.12
Title: Maintain an Active Partnership with Your Client
<p>LESSONS LEARNED SUMMARY: The River Corridor Closure (RCC) Contract was spread across several remote areas and co-located with multiple Hanford prime contractors. This integration and remote infrastructure, paired with high-hazard work, made it extremely important to develop strong lines of communication with regards to RCC project work activity. What became even more apparent was the need to develop the same strong lines of communication and relationship building with the business functions and their client counterparts.</p>
<p>DISCUSSION Description: The RCC Contract was a very unique contract, which was designed to incentivize WCH for work completed, and the closeout of all assigned work scope. This meant creating a strong integrated relationship with the client to ensure that the project work was clearly defined against the completion criteria and emerging scope, as well as to ensure that core business functions understood what the completion expectations were.</p> <p>Early in the RCC Contract WCH developed strong relationships between the leadership teams and the client to ensure safe, compliant work practices were meeting their expectations. As the contract evolved, it was equally important to not only maintain those relationships, but to create multiple lines of communications with all of the stakeholders to ensure that there were no unforeseen issues that would create problems as the project moved towards completion.</p> <p>As WCH entered into the final period of performance, the relationships that were initially established allowed for open and transparent discussions about what the client's expectations were and how those expectations were going to be achieved. Mutually understanding and establishing the methodology and advanced agreements, critical to ensuring that all work scope was completed within the boundaries and expectations of the work scope, allowed WCH to ensure that they were able to perform work with little or no rework.</p>
<p>Consequences / Benefits: Utilizing clear lines of communication, and establishing long-standing relationships with the client and stakeholders, reduced miscommunication and rework and established clear expectations for contract closeout.</p> <p>Ultimately WCH was able to provide the best value to the client by understanding what the stakeholders expectations were, and by working through issues associated with the RCC Contract work activity.</p>
<p>Implementation & Effectiveness: The tools utilized to ensure an effective implementation were facilitated interface meetings between stakeholders and the WCH senior leadership team. This was in addition to meetings established between WCH and client counterparts and the transparent exchange of information associated with work schedules and scope changes.</p>
<p>APPLICABILITY: <input checked="" type="checkbox"/> DOE <input checked="" type="checkbox"/> DOE Contractors <input type="checkbox"/> Other (Explain) _____</p>

Lessons Learned

Lesson: 6.13

Title: Be Prepared to Support Changes in the Closeout Schedule

LESSONS LEARNED SUMMARY:

Allow for flexibility in planning the closeout office. As was the case with WCH, there were significant changes in schedule, and much replanning was done during the months leading up to the closeout office that required people to be adaptable and required management involvement to sustain enthusiasm for the initiative.

DISCUSSION

Description:

Closeout for WCH was initially thought by the parent companies to occur in 2013. Then, due to several factors, including the addition of almost \$1 billion of added scope, the contract was expected to run through the original period of performance (September 2015). Then, when funding issues caused some work to be unfinished by that date, an extension was agreed to that changed the period of performance to September 2016.

Although the changes positively contributed to providing ample time to work on completing those closeout tasks that could be done concurrent with completion of field work, the extensions also introduced some challenges. As example, many procurement subcontracts remained open longer than anticipated, some of the reductions in warehouse inventory had to be adjusted, training qualifications had to be maintained longer than needed, and personnel leaving voluntarily began to exceed the pace (and disciplines) that had been planned.

Another area that was affected was Information Technology (IT). IT policies had been developed to maximize the available resources in conjunction with WCH's cost savings policies. Each of the areas (software, client hardware, and server and networking infrastructure) of the IT function was evaluated. Plans were established for reducing costs and services for software licensing, end of life (support), and support contracts. Hardware refresh was halted due to expectation of no handover. Hardware rotation started as downsizing began with a run-to-failure orientation. Plans for transferring the hosting of servers were made and then disrupted.

In the last 2 years of the contract, an increase in printer failures occurred. The failure rate exceeded the rate of consolidation causing the need to order parts. Also the contract extension and delay of virtualization led to purchasing of additional server hardware. Newer servers were exceeded a year later upon the data center virtualization onto site infrastructure.

In each instance, the challenge was to adapt the plans that had been initiated to the changing circumstances and schedules. In some cases, as in the need to procure additional equipment, there were also unanticipated cost implications. Making these adjustments was not so much a technical difficulty as they were issues of energy and enthusiasm.

Although the initial momentum had been very strong, people became less and less confident in the schedule for completing field work, and, hence, the schedule for closeout. The intensity of focus, by both DOE and WCH, waned in light of the changing and extended schedules.

Much effort was subsequently needed when the final official end date was established through a formal contract modification. The same exercises--such as joint meetings--needed to be undertaken. Perhaps the most powerful step in reinvigorating the closeout initiative was when meetings were held for each business and administrative function--attended by the WCH and DOE counterparts and facilitated by the DOE-RL contracting officer. Observing her overt and tangible commitment to a timely closeout provided the boost to

Lessons Learned

put the closeout office initiative back on track.

Consequences / Benefits:

It is hard to sustain enthusiasm and commitment over a long stretch of time, especially when the finish line keeps moving out. Although the closeout office concept was overwhelmingly successful, there was need to keep the challenges in perspective. Working together, WCH and DOE demonstrated the resolve and flexibility to make the initiative successful.

Implementation & Effectiveness:

The value and need for a timely closeout must be periodically recommunicated throughout the project, especially if there are any delays or major unanticipated hurdles. Having metrics and schedules that can be readily adapted allows the effort to remain on course--even if delayed. Personnel must also be apprised that, as with all aspects of a major prime contract, the ability to adapt and resilience are a major foundation of ultimate success.

APPLICABILITY: DOE
 DOE Contractors
 Other (Explain) _____

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Appendix A
Authors and Contributors

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Table A-1. Authors and Contributors.

Lessons Learned Section	Section Lead	Authors	Contributors
1.0 Administer the Contract	Dan Plung	Bobby Atkinson Lynn Goulet Tom Kisenwether Dan Plung	Rob Cantwell Scott Feaster Becky Hewson Bob McPherson Faith Powers Doug Siron Chuck Stewart
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2.2 Property Management	Connie Krull	Connie Krull Karen Mobley	Ora Anthis
2.3 Document Control and Records Management	Marsha Fish	Donna Eich Marsha Fish Dan Plung Susan Pogue	Tom Kisenwether Faith Powers
2.4 Information Technology	Charles Page	Dan Plung	Marsha Fish Charles Page Sean Reffalt
2.5 Finance	Lynn Goulet	Lynn Goulet Karen Mobley Dan Plung	Bobby Atkinson Don Boecker Karen Peavey
2.6 Procurement and Subcontracting	Connie Krull	Tom Kisenwether Connie Krull Dan Plung	Lynn Goulet
2.7 Internal Audit	Madge Fraley	Dan Plung	Madge Fraley Lynn Goulet
2.8 General	Marsha Fish	Donna Eich	Lynn Goulet
3.0 Human Resources			
3.1 Putting the Program in Place	Faith Powers	Tom Kisenwether Faith Powers	Peter Bengtson Don Boecker Dan Plung LeAnn Taylor
3.2 Approaching the end of the Project	Faith Powers	Connie Krull Dan Plung Faith Powers	Don Boecker LeAnn Taylor

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5.2 Organization and Administration	Connie Krull	Tom Kisenwether Kelly Powelson	Marsha Fish
5.3 Work Practices	Connie Krull	Tom Kisenwether	Dan Elkins Connie Krull Dan Plung
6.0 Contract Closeout	Dan Plung	Connie Krull Dan Plung	Faith Powers Doug Siron

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