SECTION J

APPENDIX D

MERGER TRANSFORMATION PLAN

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Merger and Transformation Plan

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prepared by
Consolidated Nuclear Security (CNS), LLC

prepared for
US Department of Energy
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NNSA Production Office

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Revision Log

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1.0 EXECUTIVE SUMMARY

The Merger Transformation Plan (MTP) describes CNS' approach to the merger of operations at the Pantex Plant and the Y-12 National Security Complex; steps CNS is taking to ensure we maintain critical skills and avoid impact to operations; how we will identify and streamline redundant technical and business operations; and the cost savings that will result from these efforts. The MTP is intended to be a high level document and includes selected elements of CNS' management approach and cost savings that were included in the CNS proposal that was evaluated for award. Further details regarding CNS activities related to the merger and transformation and our comprehensive approach to managing the risks will be described in other documents prepared during the contract transition and execution phases. CNS recognizes the significant stakeholder interest in the consolidation of the Pantex Plant and the Y-12 National Security Complex into an integrated enterprise managed under a single contract and the associated potential for cost savings. The MTP is aimed at sharing the underlying methodology, processes, and guiding philosophy with a broader audience, including stakeholders involved in the operations and governance of the M&O contract. Appendix 1 presents a crosswalk of each contract-identified requirement for the MTP and the location of each requirement within the MTP.

NNSA Goals	The CNS Approach "Run it Like Our Business"	
Improve performance in completion of missions for nuclear production operations	Protect and secure missions	Naval reactors discipline
	Revitalize performance	Outsource strategically
Transition/merge operations at geographically dispersed centers of excellence under a single contract	Booz Allen evaluation tools	Value stream mapping
	CNS team experience	Consolidated virtual organization
Reduce the cost of performing work	Culture change driven by proven techniques	Eliminate waste
	Match capacity with capability needs	Workforce incentives
Require actions that support operation as an integrated DOE/NNSA enterprise	Matrix management to eliminate silos	Redesigned approaches
	Enterprise baselines for all levels of organization	Sustainable delivery of IT solutions

Figure 1 - NNSA Goals

The MTP is a companion document to the Cost Reduction Proposal (CRP), which is submitted and updated separately and includes a description of the specific cost savings initiatives to be implemented. The MTP provides an overview of the cost savings program and includes the timeline of projected savings for the next 10 years. The MTP serves as the CNS guideline to develop its annual savings targets that are implemented through the CRP and the associated initiatives. The plan identifies CNS' approach to the merger and transformation process, including executing the consolidation of the two sites under a single management structure, transforming the site operations to create a more efficient and sustainable enterprise, and practicing continuous improvement.

The MTP is just one of several documents that will enable CNS to execute its cost savings program in partnership with NNSA over the life of the contract. CNS recognizes that the budget, scope, and specific actions to achieve savings will change over time. As such, CNS expects that the MTP will need to be revised periodically as budget and scope changes affect the underlying values and timing which make up the projected cost savings. The MTP will reference a number of other plans, policies, procedures, and tools which will be used to control and modify the baselines as they change over time. These include the Annual Controlled Baseline (ACB), CRP, the CRP Policies and Procedures (and its associated Cost Reduction Initiatives), the CNS Risk Management Plan, as well as the Change Control Process (and the associated Change Management Council) that will govern changes to these inputs.

CNS is committed to fulfilling expectations set in place by NNSA, including: mission fulfillment, safety standards, schedule compliance, and vigilant security. Additionally, CNS has charged its leadership at the highest levels to bring a sense of urgency to the effort that will foster innovative approaches to increase cost efficiency in serving NNSA. The leadership's cost efficiency goals intend to sustain NNSA operations and solidify the viability of the Pantex Plant and Y-12 National Security Complex for future administrations and national needs, both apparent and unforeseen. As CNS leadership creates the foundation of an organization built to secure NNSA's objectives, they will set in place a top-down structure inculcated with the purpose of honoring those commitments.

2.0 CNS' APPROACH TO MERGER AND TRANSFORMATION

CNS is a partnership of organizations with shared values and aligned goals The shared values are embedded in the CNS corporate culture and reflected in its description of the 'five absolutes': safety, security, mission delivery, quality, and cost efficiency. Adherence to these five absolutes throughout the Pantex/Y-12 merger and transformation is central to the success of CNS and an absolute necessity to satisfy NNSA requirements. As CNS approaches the issue of merger, transformation and cost savings, it must not deviate from the other four 'absolutes'. This challenge demands an approach that is not just different from the previous management entities, but a superior approach that is set apart by unmatched expertise and resolve.

CNS recognizes the NNSA vision of operational efficiency, and is committed to streamlining the site operations to establish higher productivity and realize lower unit delivery costs without impacting safety and security. To achieve these results, CNS will share resources that are more mobile, use consistent approaches to the maximum extent practical, and install a leadership team that is fully aligned with NNSA goals. Throughout the process, CNS will manage the merger and transformation of the Pantex Plant and the Y-12 National Security Complex without negatively affecting mission delivery.

To enable the merger and transformation activities, CNS is leveraging its corporate capabilities and approaches, including a number of tools and experiences that the CNS partners - Lockheed Martin, Bechtel, ATK, and Booz Allen - have used with success on other contracts and internal corporate initiatives. For example, CNS has specifically designed its Enterprise Excellence (E^2) initiative by combining the best practices of Bechtel's Lean Six Sigma (LSS) program, Lockheed Martin's Operating Excellence Program (LM21), and ATK's Performance Enterprise System (PES) to create a tailored production enterprise-specific continuous improvement program for this contract.

Beyond tools, CNS is bringing a wealth of corporate experience and expertise to run NNSA's production enterprise with the same focus we use to run our businesses. Our confidence is based on the quality of our leadership team and in the success of the process brought by Booz Allen that has been proven in over 600 merger and transformation efforts. This confidence is demonstrated

by the fact that Booz Allen is fully incentivized to achieve this end state—it earns its fees only from the cost savings it helps generate. Likewise, CNS is also fully incentivized to deliver the savings and guard against unintended consequences.

Through experience, CNS knows that merging effectively is problematic by virtue of the changes needed in both cultures and business systems. Sustaining initial gains made through the mergers increases the challenge. Studies show that 50% of all merger/acquisitions fail to deliver the established goals. CNS brings extensive merger-transformation experience and has designed a comprehensive approach to keep the organization focused on achieving and sustaining the goals laid out in NNSA's procurement and the vision for the future Nuclear Security Enterprise. Our structured approach will help CNS ensure:

- Merger activities across sites are done thoughtfully and will not only deliver near-term cost savings, but will set the stage for enhanced operational performance and safety that are sustainable.
- Organizations are right-sized to meet the needs of the combined enterprise, and, where necessary, processes are transformed through redesigned work approaches.
- People in the consolidated organization are proactively and positively engaged as critical stakeholders

Figure 2 depicts the Booz Allen Objective Driven Change Framework that CNS will implement to provide rigor and structure to our merger and transformation activities. This approach has been proven on hundreds of post-acquisition mergers and business transformations; each step of the process is supported by a suite of effective tools and guides that support planning, implementation, monitoring, and reporting. The framework includes four logical steps: setting the vision/mission for the desired change, creating understanding and consensus for the change, carefully laying out the blueprint for the change, and executing the change. Most importantly, the framework leads to sustained cost reductions while preserving mission accomplishment because execution of the mission is always the highest priority.

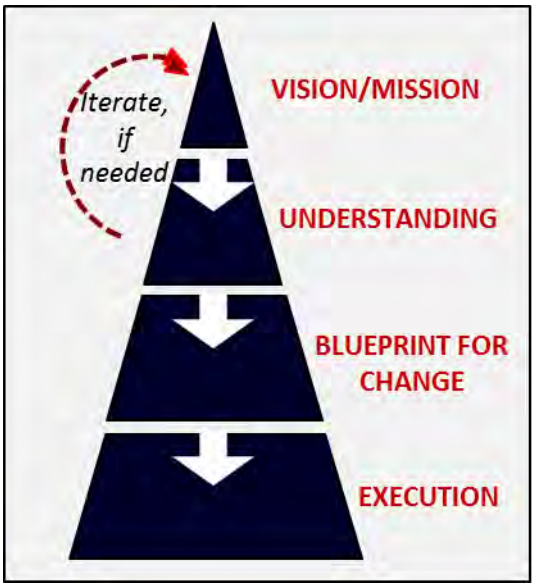

Figure 2 - Objective Driven Change Framework

One of the first activities CNS completed under implementation of the Objective Driven Change Framework was the design of the CNS organizational structure. CNS started by setting the goals for the structure that included:

- Keep a strong focus on the missions. The missions are the reason for NNSA, the sites, and the workforce.
- Clearly translate the desires, expectations, and goals of the customer into actionable objectives for every level of the organization.
- Facilitate consistency of approaches across sites, programs, projects, teams, and work groups.
- Enable the merger of the two or more sites under a single contract, allowing consolidation and cost savings where possible **without impact to the missions**.
- Align authorities with accountabilities to empower decision-making at the lowest effective

level.

- Increase employee engagement to achieve organizational goals such as efficiency; continuous improvement – enhanced security, upgraded safety, enriched quality, and compliance; and maximize value to the customer.

During this vision and mission stage, CNS set a critical standard by identifying the most advantageous and realistic future state of the organization. CNS has examined necessary criteria such as the capabilities demanded and finances required for the future organization. A coherent baseline was established and gaps from the current position to the future position are interpolated. This will allow CNS to ensure that a proper mix of crucial skill sets remain throughout the merger to maintain continuity, uphold current obligations, and ensure viability of future work.

The organization, as shown in Figure 3[1], drives efficiency through a matrix structure. The organization is built around a core of Mission Delivery (i.e., Pantex and Y-12 Operations) with staffing tightly controlled in these areas to mitigate any risk to safety, security, and quality. The supporting organizations are right-sized to ensure that Mission Delivery is fully enabled to perform, have the requisite security in place, and have appropriate oversight to ensure all requirements are met. Because of their importance, we are making minimal changes to Mission Delivery Organizations under the consolidated contract. In future years, in cooperation with NNSA and drawing on the full knowledge of the incumbent workforce, we will use value stream mapping to delineate each step of each mission, handoffs between sites, overlapping responsibilities, and interactions with the design labs. We will then identify which support and oversight functions "touch" those value streams and how they contribute to success. This approach will enable us to recommend additional cost savings initiatives that will take the transformation to the next level by optimizing the direct mission value stream.

[1] Since the organizational structure is subject to change, the key elements that will remain relatively consistent are the executive-level structure and their secondary-level structures (e.g. Mission Engineering, Mission Assurance, etc.). The tertiary structure may be subject to change as staff continue to transition and management is finalized; for example, Ethics and Internal Audit were previously organized under Mission Assurance but now stand independently.

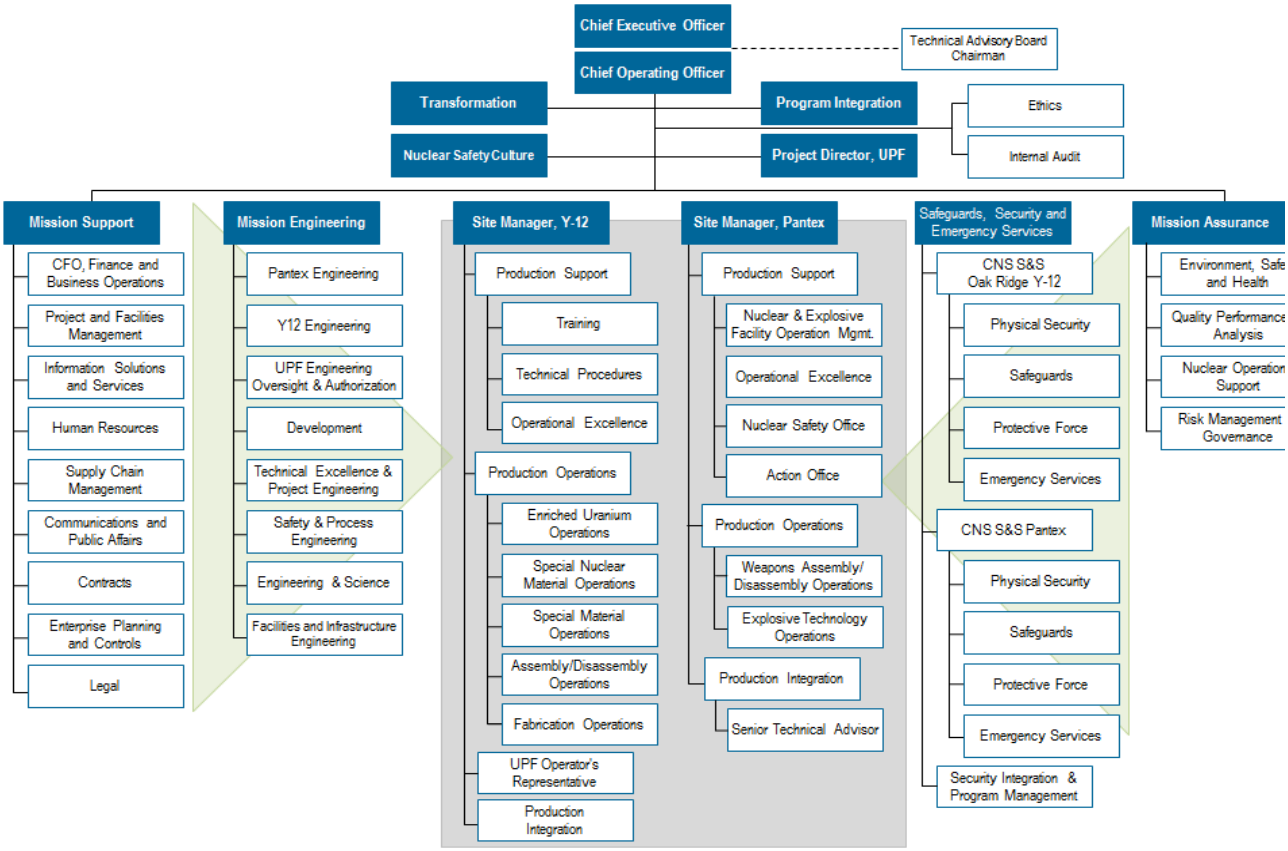

Figure 3 - CNS Organization Chart from Staffing Plan

As previously noted, there will be minimal negative impact to the mission given the design of the CNS approach to merger and transformation. Central to this mission-oriented objective is developing and retaining critical skills. The ***CNS Staffing Plan*** submitted April 8, 2014, provided our initial approach to ensure that we will at all times have the skills needed to accomplish the mission of the Pantex and Y-12 sites. This Staffing Plan described the process and criteria by which CNS has identified current and future skill sets to achieve the mission and goals of NNSA and CNS. This ongoing process will operate in concert with merger and transformation activities to ensure that the critical skills necessary to maintain capabilities are not adversely impacted by the transformation and cost savings efforts.

2.1 Critical Skills Retention and Development

CNS defines Critical Skills as the skills required to support the unique DOE mission that, based on market demand, are difficult to recruit, retain and/or develop. CNS identifies and tracks all skills using the Common Occupational Classification System (COCS) in accordance with DOE O 350.1 Contractor Human Resources Management Programs, and Federal Register, Vol.61, No. 44, p. 8600.

The Commission on Maintaining United States Nuclear Weapons Expertise (a.k.a. "Chiles Commission") submitted a report in compliance with the National Defense Authorization Acts of 1997 and 1998. These acts directed us to "Develop a plan for recruiting and retaining within the Department of Energy (DOE) nuclear weapons complex such scientific, engineering and technical personnel as the Commission determines appropriate in order to permit the Department to

maintain over the long term a safe and reliable nuclear weapons stockpile without engaging in underground nuclear testing." CNS accomplishes this through workforce planning with an emphasis on critical skills as defined above.

CNS recognizes that the workforce, including its composition and capabilities, is an essential component of the nuclear production sites and the national asset that they represent. CNS utilizes a strategy for identifying the appropriate skill mix needed to accomplish current and future mission work then established a variety of methods to attract, recruit, develop and retain those skills. The strategy features the development of organizational baselines and staffing models to better define and document the skills necessary for accomplishing the mission. The strategy also includes the development of increasingly sophisticated attrition models to inform the planning and transformation efforts. This comprehensive planning provides a dynamic map to workforce restructuring, realignment, staffing, and employee development. CNS continues to partner with universities and military job fairs to provide a pipeline for the critical skill needs for future missions. In addition, compensation and benefits are monitored to stay competitive for talent in the lean technical market. Plans are to increase hiring, realign skills and continue to develop scientists, engineers, and technical personnel in each of the critical skill areas.

2.2 Managing the Transformation

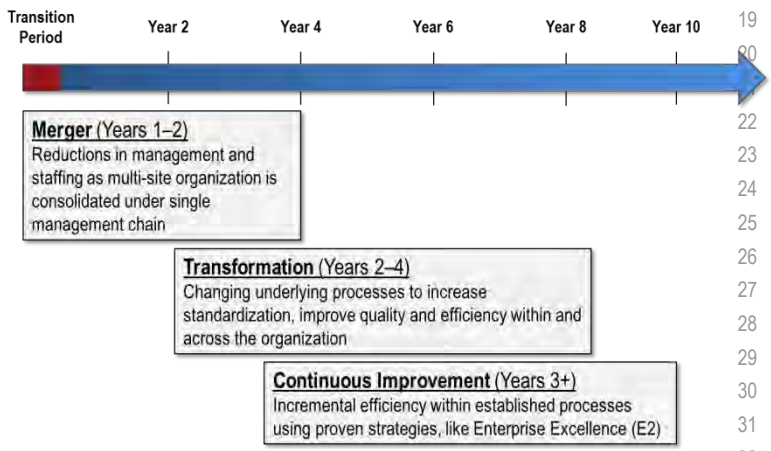

Figure 4 – Phased Approach

In order to build a consensus around the transformation vision, CNS is developing a case for the changes necessary to enable the organization's long term viability and success. As shown in Figure 4, these changes follow a logical sequence of activities related to the merger of the sites (Years 1-2), transformation of the underlying business processes (Years 2-4), and continuous improvement initiatives (Year 3 and beyond). As part of the contract transition activities, CNS is socializing necessary organizational changes with stakeholders (including regulatory interfaces) and translating the vision into specific targets that can be communicated to managers and staff. CNS will maintain relationships and regulatory interfaces and recognizes the importance of assuming responsibility for permits with local, state and federal entities, and other DOE offices. The CNS leadership structure has identified its regulatory interfaces, has engaged in dialogue during the Transition Phase, and will continue to interface during contract operations. Details of this interface can be found in the Interface Management Plan and the Transfer Agreement. If disparity exists between the vision and mission and the understanding, CNS will iterate to further develop the vision and mission, creating consensus and eliminating potential obstacles to implementation of the cost savings program.

As the vision and mission are socialized and consensus is developed within the organization, a blueprint for change will emerge that will support the development of the initial CRP submitted upon contract turnover on July 1, 2014. The blueprint for change will serve as an internal management tool to help understand how the future organization will operate; what new

capabilities will be built; how financial targets will be accomplished; and, how the accomplishments will be measured. The future organization will be appropriately equipped and resilient to meet the demands inherent in its operational ecosystem. This blueprint will illuminate steps the organization's management must take toward accomplishing its goals.

The blueprint will show how CNS will perform short-term re-engineering of business processes to ensure that all commitments are honored through the transformation. To complete the transformation, CNS will lead a long term restructuring process to permanently equip the organization for success. Through execution and for the duration of the engagement, CNS will track the organization's accomplishments. The accomplishments will create substantial increases in the organization's financial capabilities and operational efficiency, which will allow CNS to reduce costs in line with NNSA goals.

CNS also brings a vast reach-back capability to engage specialists and experts from parent organizations to address specific issues within multiple fields of expertise. With the exception of the Kansas City Plant, the nuclear production sites are the most analogous to commercial operations. This commonality lends itself to a greater leveraging of commercial best practices where the corporate experience of the CNS companies can be leveraged. CNS recognized this opportunity and installed a management team with a powerful blend of NNSA and commercial expertise and experience. Through the combined experience and networks of these leaders, CNS will be proactive in bringing the appropriate corporate capabilities and resources to enhance mission delivery and fulfill CNS' commitment to run the sites like a business. Further, CNS has established a corporate Board of Managers with senior executives from the parent companies to ensure that these commitments are met. The parent-companies of CNS are poised to augment CNS with additional resources to cover high-demand periods within the contract cycle. These resources are proven effective through the parent companies' multiple diverse contracts, both historical and ongoing.

In addition, CNS intends to install a Technical Advisory Board (TAB). The TAB serves as an independent resource to advise the CNS on strategic direction, formation of a more effective production enterprise, nuclear production challenge resolution, and risk and opportunity assessment.

3.0 EXECUTION OF THE MERGER TRANSFORMATION PLAN

As noted above, the MTP includes the timeline of projected cost savings and serves as the basis for developing the CRP for the contract. CNS will develop a CRP and anticipates updating it at least annually through a formal Change Control Process (CCP). The CRP will include detailed information about the Cost Reduction Initiatives (CRIs) that CNS proposes to execute during the upcoming year in order to meet or exceed the saving targets proposed in the MTP. The initial CRP was submitted for NNSA approval at the end of the contract transition period.

The basis of the cost reduction activities are the individual CRIs that describe the action and expected savings outcome undertaken by CNS. CNS will revise its CRIs on an annual basis or more frequently, as appropriate, as part of the CRP process. If individual CRIs are not approved for execution, CNS will re-examine CRIs in question and re-submit revised and/or additional CRIs to make up the shortfall. CNS anticipates that it can successfully iterate the CRI process as needed if some initiatives are not implementable because our current savings estimates are conservative in nature and do not yet capture all of the savings potentially available to NNSA. Should alternative initiatives not be sufficient or timely enough to generate the necessary savings, CNS may seek adjustments to the overall projected savings. Such changes would require agreed upon adjustments to the cost savings curve as well as the CSIF table (and associated share and

duration assumptions). CNS also expects that changes in the ACB, in terms of budget or scope, may also require revisions to the MTP on a periodic basis.

It is also understood that there is inherent risk in execution of a CRI and that CNS and NNSA both own this risk. Such elements of risk may be incurred during:

- Implementation of the CRI
- Determination of the cost of implementation
- Ability to demonstrate savings

CNS understands that such risk makes the risk management process (outlined in Section 5) as well as governance of the merger and transformation activities even more critical.

4.0 GOVERNANCE OF THE MERGER AND TRANSFORMATION ACTIVITIES

Since we will have multiple merger and transformation initiatives staged for implementation or in the process of being implemented at any particular time, CNS created a system of management and controls in the stewardship of the organization. Governance will foster trust and confidence between NNSA and CNS by creating shared expectations, appropriately delegated authority, and accountability. The primary governance body is the **Change Management Council (CMC)**. The CMC is a decision making body responsible for aligning objectives among CNS organizations and with the CNS Business Strategy; accommodating planned and emergent changes to federally supplied funding; ensuring CRIs are individually and collectively consistent with CNS safety, security, mission delivery and quality expectations; and seeking continuous improvement in CNS cost efficiency. The Change Management Council also controls the coordination, governance, configuration management, and change control of all processes. It delivers a common framework for all documentation for a simplified “single-process” approach. Not only does the CMC approve individual cost savings plans, they also look for potential synergies and conflicts between multiple efforts and protect against unintended adverse implications that might result from implementation of the initiatives.

The CMC meets periodically to review risk mitigation plans and assess the impact of ongoing initiatives on the safety, quality, and productivity of the consolidated organizations. NNSA is encouraged to participate in CMC meetings to provide the customer perspective. When the CMC accepts an initiative and it is approved through the NNSA scope authorization process, line management takes the actions needed to accomplish it. The CMC will monitor and control process drift by using ISO 9001-compliant tools, regular follow-up, and risk-informed oversight.

CNS plans to use the CMC as the primary governance mechanism for reviewing and approving scope changes and savings initiatives. However, CNS also recognizes that there may be circumstances where urgent scope changes may need to be implemented in advance of the CMC meetings and approval process. In such circumstances, CNS will account for changes by identifying whether the change was directed by CNS or NNSA and, if NNSA directed the change, CNS will document the name of the individual that provided direction. This information will be made available to the Contracting Officer. Changes credited to the Government that are unsupported may be a basis for rejection.

CNS uses a graded approach to managing initiatives based on the complexity, scope, risk, and timing of each initiative. Initiatives with broader reach across the enterprise and greater risks of implementation will receive greater involvement and oversight from the CMC and a greater allocation of resources for planning and managing the initiative. In all cases, the same tools are used—the Enterprise Excellence (E2 is a production enterprise-specific continuous improvement

program) tools and the experts available through the Transformation Manager will bring process discipline and the outside perspective that we have found is needed to ensure that planning and implementation lead to real and permanent cost reductions.

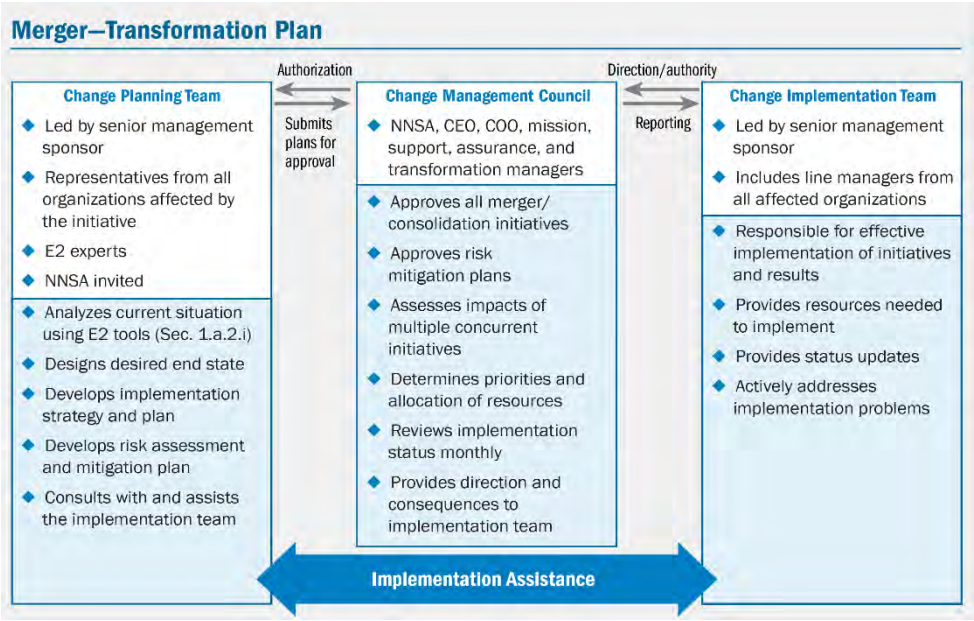

Figure 5 - Management and Governance of Change Initiatives

CNS recognizes that it is not cost effective or appropriate for NNSA to review every initiative so initiatives exceeding a certain threshold will be submitted to NNSA for review. The approval process with NNSA is included in the CRP policies and procedures. The CRP policies and procedures expand upon how CNS will work with NNSA to meet the requirements outlined in I-19(e) clause of the contract.

To implement the initiatives we have identified, as well as any identified in the future, we will use the process defined in Figure 5. This process recognizes that there have been and probably will be different groups developing and implementing merger/transformation ideas. Our CMC serves as liaison and intermediary between these groups. The figure shows how these planners, implementers, and change managers work together to ensure that we deliver on our transformation goals without creating unintentional conflicts or impacting other performance. Our merger and transformation initiatives are managed as projects with clear responsibilities and accountabilities established for planning and for implementation.

The CPT assesses the current situation, designs the desired end state, develops the implementation strategy and plan, and develops the risk mitigation plan for the initiative. These plans are presented to the CMC for one-stop approval. During its review, the CMC is responsible for assessing the adequacy of the risk mitigation plan and minimizing the potential for concurrent initiatives to affect the ability of the enterprise to execute its mission safely and securely. It also determines the relative priorities of the various initiatives and allocates resources according to the mission priorities. It is in this forum that the cross-site coordination of various change initiatives occurs to ensure that a common and consistent approach is being taken and that the implementation is being appropriately integrated into enterprise operation.

4.1 E2 Continuous Improvement

Enterprise Excellence (E2) is the critical aspect of CNS's strategy to drive improvement, efficiency, and cost savings across the organization. The E2 model relies on a strong sense of **Enterprise Alignment** achieved by a process of strategy deployment focused on delivering **Customer Value** and **Business Results**. Execution is built around a management system that translates goals and objectives into actions and metrics at every level of the organization while providing for regular structured follow-up and escalation. The following are the key components of the E2 program and

are detailed in this section:

- Top-down Strategic Deployment
- Change Management Council (CMC)
- Bottoms-up Responsibility
- E2 Office Roles and Responsibilities
- Tailored Communication and Deployment
- E2 linkage with The MTP/CRP

As part of its strategic deployment, E2 connects with the CNS strategic objectives and the annual Cost Reduction Proposal to ensure flow down of goals and objectives. Its mission is focused on engaging employees in order to identify, refine, and implement process improvements to deliver customer value with uncompromised safety, security, and quality, while earning new opportunities with NNSA and new customers. E2 was formed from a team of senior LSS experts from each of the CNS partner companies who have performed a comprehensive analysis of heritage continuous improvement programs at CNS partners as well as the Pantex and Y-12 facilities. The intent is to identify and incorporate the strengths of each program in a way that is unique to CNS, can be presented as evolutionary to existing strengths at Pantex and Y-12, and yet is unmistakably capable of providing a framework to engage the entire organization to deliver on continuous improvement commitments. E2 will provide an approach to help achieve near-term transformation goals (integration and cost-efficiency as provided in the MTP/CRP and long-term, sustainable continuous improvement.
While E2 utilizes Lean Six Sigma (LSS) and Total Quality Management (TQM) methodologies to identify, evaluate, define, and implement process improvement, from a strategic perspective, it functions as one CNS system and one CNS voice with all employees at the center of the model engaged in continual improvement of their work in collaboration with leadership and supported by LSS experts. Through the engagement of employees and with the use of expert LSS facilitators as well as LSS tools and workshops, CNS will identify cost reduction and efficiency improvement opportunities, as well as facilitate integration of plant-specific processes into single enterprise-level processes. Under the guidance and oversight of the CMC and line management. CNS will coordinate, launch, and manage E2 projects that include VSMs, Kaizens, Rapid Improvement Activities, and business cases to drive improvements and integration across CNS. The LSS facilitators will utilize appropriate tools from their toolkits, regardless of the source. The approach and tools are to be applied in an optimal manner based upon the scope to be accomplished.

As part of the E2 deployment, the heritage LSS programs from the parent companies will be evolved to engage all employees. While not directly duplicating any of these programs, the E2 approach borrows successful aspects of them all and remains consistent with their relevant philosophies/approaches. The E2 program will maintain the same Y-12/Pantex expert resources (e.g., the MBB, BB, and YB facilitators) while enabling employees to have the proper authority and additional ability to improve their work. Cross-functional and cross-plant Continuous Improvement (CI) teams will be utilized to ensure the correct process performers and stakeholders are involved in arriving at an optimal solution. These teams are assembled at the discretion of line management (at various levels) to address challenges faced by the workforce – completion of merger/transformation tasks, achieving cost efficiencies (budget reduction targets), safety/security/quality enhancements, time/waste reductions. The CI team participants will be determined by the scope and complexity of the task. The tasks will have a defined starting point and ending point to enable team members and line management to gauge/measure success of the initiative. The team will analyze the current situation/process, determine changes that are needed, and present the results to affected line management for approval. Implementation responsibility lies with line management (who owns the process and resources for change). The use of CI teams empowers line management, at all levels, to meet their assigned mission delivery goals while reducing costs to accommodate challenging budget targets.

Business leaders will be used as a key resource for employees such that they will be able to remove old and new process obstacles in order to improve their work life. Essentially, E2 is a mental model on how staff will think and act about improving their work while doing their work, and, ultimately, while being recognized for their efforts. See Figure 6 as a visual depiction of the approach. It is a continual driven by CNS employees that stays in alignment with CNS's strategic vision and self identifies improvement opportunities.

Figure 6 Enterprise Excellence Process

The E2 Office will develop intellectual capital and build standardized yet flexible structures and processes to not only launch and lead improvement efforts independently, but also to assist business leaders in executing their individual CRIs and other operational improvement efforts[2]. Moreover, it leverages current "Best-Practice" corporate tools and processes taken from all of the CNS partners. All CNS missions will be Value Stream Mapped in a prioritized fashion to gain greater "start-to-finish" understanding of the processes and to identify waste, redundancy, ineffectiveness, and inefficiencies. This analysis will then lead to launching LSS projects and events to drive improvements and reduce operating costs while always focusing on maintaining safe and secure operations. Collaboratively, the CNS partners have a depth of corporate expertise to contribute to the design and implementation of E2. To this end, CNS will institute a Fellowship Program, as described in the proposal, which will engage our employees in expanding their horizons, provide exciting opportunities for growth, expose them to new ways of getting work done, and spike the organization with change agents.

[2] The CRP Policies and Procedures document provides additional explanation on the linkage between E2and implementation of the CRIs.

Relevant and verifiable metrics will be used from inception to completion in order to promote continuous evaluation to identify merit, track progress, and establish visibility. The traditional use of only "output" metrics, such as "tasks completed," will have to be expanded. Both "Quality" and "Performance" metrics will be developed which not only focus on "outputs," but also inputs as well as leading indicators to better mitigate issues before they impact final production. In addition to the traditional simple "count" metrics, "efficiency" metrics will be developed to not only to manage the volume of work and production, but also how efficiently CNS works. This is critical to understanding our true performance levels.

To encourage immediate "buy-in" from the CNS stakeholders and workforce, metrics, target baselines, incentives, etc., will be used to facilitate a bottoms-up approach in order to encourage employees to engage in the E2 program. For example, in a series of recent working sessions, CNS has already generated support and participation from incumbent Operating Excellence practitioners (Pantex and Y-12). The focus was to overview the E2 baseline, provide a forum for open discussion, and solicit input to generate a team approach inclusive of existing Pantex and Y-12 personnel. In the future, E2 will generate support by training staff to ensure they are prepared to collaborate in the E2 process. For example, staff at all levels will be encouraged to complete appropriate LSS training for their specific position and then collaborate with their leaders and team members to actively search for improvement opportunities while ensuring mission success. Successful LSS projects and events will be celebrated throughout the organization and institutionalized and replicated across not only the individual locations, but across both Pantex and Y-12, where possible, so that the organization learns as quickly as possible. In addition, an incentivized program for collection, disposition, and execution of employee ideas for cost efficiencies will be employed.

While E2 will be critical to continuous improvement and alleviating roadblocks to efficiency, it should be noted that there is a significant organizational culture aspect to E2. This is necessary to develop bottoms-up responsibility. The E2 Office will work closely with senior leaders and stakeholders at all levels. E2 will provide reach-back support for mission efforts as well as other pro-active support such as conducting formal LSS training, conducting informal brown-bags and workshops, and leveraging all-hands meetings and other forums to keep the organization energized, focused, and involved in driving improvements. E2 will encourage employees to engage in the program at many different levels of effort (LOE), allowing them to be trained in the continuous improvement concepts and take ownership for their ideas. CNS will institute a Value Sharing Incentive program, as described in CNS's proposal, to reward employees who are engaged in helping the organization succeed. As good ideas become LSS projects and are implemented, E2 will continually solicit employee feedback. Ultimately, at the end of the E2 process cycle, results will be shared with all participants, employees, and stakeholders, ensuring transparency in this program. As the program is executed, it will influence organizational culture by emphasizing elements such as employee/wellness initiatives, facility improvements, special recognition awards, etc. showing a true cadre of employee focus and process improvement.

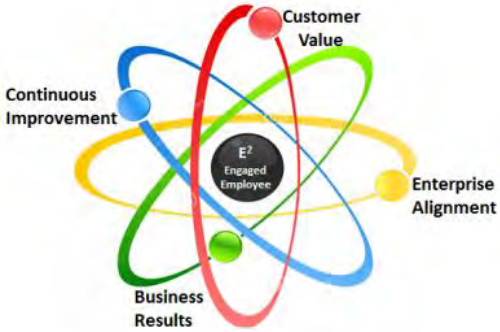

Figure 7 - E² Model: Engaged Employees Driving Enterprise Excellence

In order to execute E2 and ensure that all parties are engaged, a comprehensive deployment approach continues to be refined that captures and delivers on proposal commitments. To ensure

a consistent message tailored to target audiences in all parts of the organization, various methods are being utilized to share E2 information and successes such as leader communications, all hands messages, FAQ's, SharePoint site, newsletter articles, project updates and customer communications.

5.0 RISK MANAGEMENT

CNS is especially sensitive to the possibility that implementation of a cost reduction initiative could result in an increase to the likelihood or possible consequence of an adverse outcome. In fact, CNS recognizes that many of the non-value steps in current processes have been added over the years as corrective actions for adverse events. CNS's Enterprise Risk and Opportunity Management (EROM) will reduce this variation by providing all stakeholders with a common means of proactively, and continuously managing threats and exploiting opportunities.

CNS's EROM procedure implements the ANSI[3]/PMI national standards for risk management, project, program, and portfolio (enterprise) management. These standards have been developed by collaborating with industry practitioners from around the globe on the current trends and practices that make their organizations successful. The output of this collaborative process is the documentation of currently recognized "best practices".

When fully implemented, this EROM Process is intended to deliver the following benefits:

- Minimize future 'surprises' for CNS executive management, NNSA and other key stakeholders
- Reduce crisis management and firefighting
- Clear responsibilities for EROM across the organization
- Improve allocation of limited resources
- Enhance team communications (internal and external) and commonality of approach
- Improve contingency planning for high impact events
- Assist organizational management to understand the potential severity of risks, and to develop focused response plans in line with the organization's risk appetite and tolerance
- Ensure rapid assessment of risks profiles through standardized reporting
- Improve ability to aggregate and disaggregate risk in support of cost-benefit and other analysis
- Provide predictive metrics
- Ensure a holistic view of risk is taken, extending beyond cost and time impacts to include safety, quality, environment, community, reputation and security – impacts whose knock-on cost and time implications can be enormous
- Increase value of the project investment through identification and management of opportunities
- Reduce probability of poor organizational performance

The risk management process is fully integrated into our baseline management that is central to the cost savings and transformation program. Risk is a standard topic in all our progress review meetings, ensuring constant management attention, action, and visibility to NNSA.

Managers are accountable for owning the risks that affect their work scope responsibilities and for systematically working to reduce or eliminate risks and realize opportunities.

[3] CNS has replaced the INCOSE term with ANSI.

Risks and opportunities are proactively and systematically identified during detailed planning of each work activity, at all levels of the project—from the CEO and COO through our subcontractors.

When only the word "risk" appears, it is implied that opportunities are also included, as applicable. In other words, a positive risk is another way of referring to an opportunity.

5.1 Project / Program Risk & Opportunity Management Process

Data flow starts at the project team level with risk and opportunity identification and assessment.

5.1.1 Process Flow

The risk and opportunity management process is illustrated in the following figure.

The emergent nature of risk requires the Risk Management process to be iterative in nature. During "Plan Risk Response" it may be necessary to return to earlier process steps due to the likelihood of residual exposure after risk response is employed.

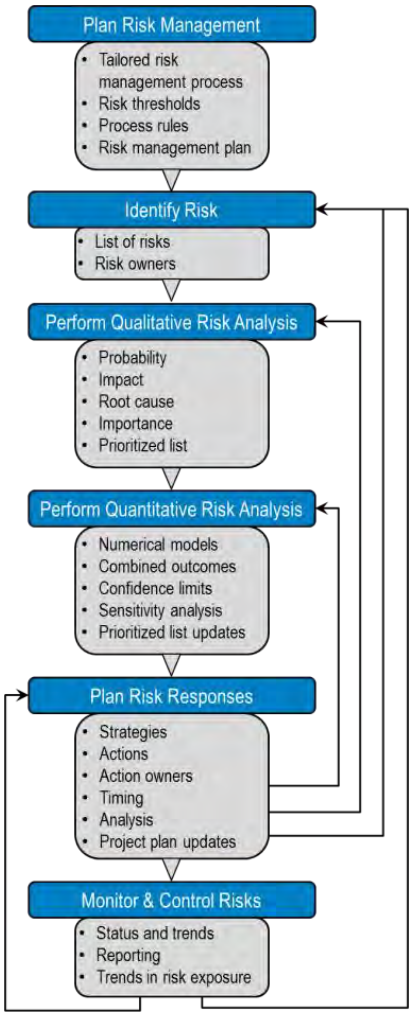

Figure 8 - Project Risk Management Process[ii]

5.1.2 Plan Risk Management[i]

The CNS Risk Management Plan will describe how risk management activities will be structured and performed. It contains the following information.

- **Methodology:** Defines the approaches, tools, and data sources that will be used to perform risk management on the project or program.
- **Roles and responsibilities:** Defines the lead, support, and risk management team members for each type of activity in the risk management plan, and clarifies their responsibilities.
- **Budgeting:** Estimates funds needed, based on assigned resources, for inclusion in the cost baseline and establishes protocols for application of contingency and management reserves.
- **Timing:** Defines when and how often the risk management processes will be performed throughout the project life cycle; establishes protocols for application of schedule contingency reserves; and, establishes risk management activities for inclusion in the project schedule.
- **Risk Breakdown Structure (RBS):** The RBS is a hierarchical representation of risks which is normally decomposed consistent with the contract WBS.
- **Revised stakeholders' tolerances:** Stakeholders' tolerances, as they apply to the specific project, may be revised in the Plan Risk Management process.

- **Reporting formats:** Reporting formats define how the outcomes of the risk management process will be documented, analysed, and communicated. It describes the content and format of the risk register as well as any other risk reports required.

- **Tracking:** Tracking documents how risk activities will be recorded for the benefit of the current project and how risk management processes will be audited.

The Risk Management Plan is where appropriate scaling or tailoring of the Enterprise Risk Management Procedure is outlined. This tailoring is necessary given the variation in project and program size, duration, and scope. The major CNS and customer stakeholders shall be responsible for approving the Risk Management Plan.

5.2 Identify Risks

The R&O identification process will document the risk, the source, and category of the risk in the risk register as noted in the figure below.

Risk	Mitigation/Handling Strategy
Merging operations at three geographically dispersed sites while maintaining mission deliverables	
Poor internal communications in a consolidated organization (Cost, Schedule, Safety, Security, Mission)	We use our merger-transformation approach to establish the communications, responsibilities, and expectations during transition. Our leadership team is skilled in effective use of SharePoint virtual communications and environments. We will maintain concentrated focus on leader–team communication based on face-to-face/SharePoint communications. Our key leadership teams are ready to geographically locate to the most effective nexus for communication and interfaces. Before the end of transition, we will hold manager, leader, and customer training in best practices for managing remote teams and maintaining open communications.
Integrated IT and back-office systems become too complex. (Cost, Schedule)	Our IT approach mirrors NNSA's 2NV using integrated data warehouse and cloud-based applications (see Sect. 1.a.1). Common toolsets and centralized systems with communication backbones/ networks ensure that we make decisions on the same data by enabling seamless access. Common systems and tools improve internal communication and support a geographically dispersed team at minimal cost. Bechtel, Lockheed Martin, ATK, and Booz Allen have proven expertise in integrating multiple sites as part of their business practices.
Risk mitigations of implementing continuous cost savings opportunities while maintaining mission deliverables	
Initial reductions of staff in excess of defined needs (spread across the sites) could affect capability to deliver the mission (Cost, Mission)	CNS' merger-transformation approach accounts for maintaining critical skills in all staffing decisions (to be reviewed with NNSA and incumbents during transition). Our Employee Leave policy to be implemented on January 1, further mitigates this risk by reducing "hours not worked" from the current baseline averages. Also, team member companies have the depth and breadth to provide extensive resources on a temporary or permanent basis. Finally, staff augmentation subcontractors provide a local surge capacity.

Figure 9 - Risk Register Examples

5.2.1 Perform Qualitative Analysis

Qualitative risk analysis is the process of prioritizing risks for further analysis or action by assessing and combining their probability of occurrence and impact.[iii] After the Qualitative Risk Analysis is complete, a Qualitative Prioritization will be done using a Probability – Impact (PI) Matrix, scored using a standard scorecard, and the PI Matrix format shown in Figure 10.

The individual cells of the Risk Matrix have a priority sequence which provides a Risk Ranking. Risks are also prioritized according to the colored Severity Bands to which they belong. The Current Risk Ranking is the Risk Ranking based on the state of the risk at the time of evaluation,

taking into account those Actions that have been completed and those Controls which are effective. As further Actions and Controls are successfully applied, the Current Risk Score will change, hopefully getting closer and closer to the Target Risk Ranking.[iv]

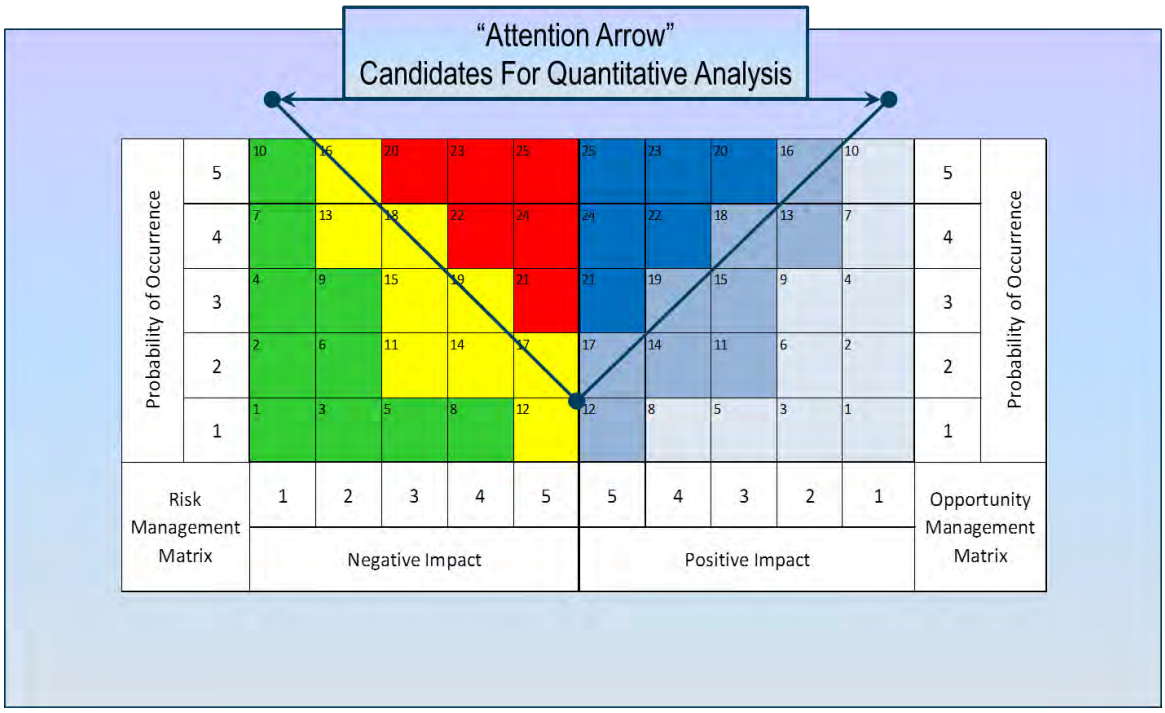

Figure 10 - The Probability-Impact Matrix Showing The "Attention Arrow"

The PI matrix is a fast and relatively inexpensive technique for establishing priorities, but it does not always accurately represent risk.

For those risks and opportunities that are found inside the "The Attention Arrow" at the center of the chart (see Figure 10), it is recommended that a more accurate, more extensive Qualitative Analysis also be conducted. Of those risks that are not in the Attention Arrow, all should be considered for Quantitative Analysis, but some will have a low enough risk or opportunity score that the time and cost of Quantitative Analysis is not warranted, and they should proceed directly to the Plan Risk Response process.

A mitigation plan is developed for each risk which is not avoided, transferred or accepted. In like manner, opportunities shall have a plan for exploitation.

Low probability, high impact risk (e.g., risk rank no. 12 on the PI matrix in Figure 10) should not be dismissed as requiring no further action, due to the low probability of occurrence. It is precisely because of the severity of the impact that these risks should have a contingency response planned as well as additional quantitative analysis.

5.2.2 Perform Quantitative Risk Analysis

CNS will perform quantitative analysis on risks that our qualitative analysis indicated as having the potential to substantially impact project, program, or organizational objectives. Other risks which are outside the Attention Arrow, and have low probability of occurrence, but high consequence, will also be considered for quantitative analysis.

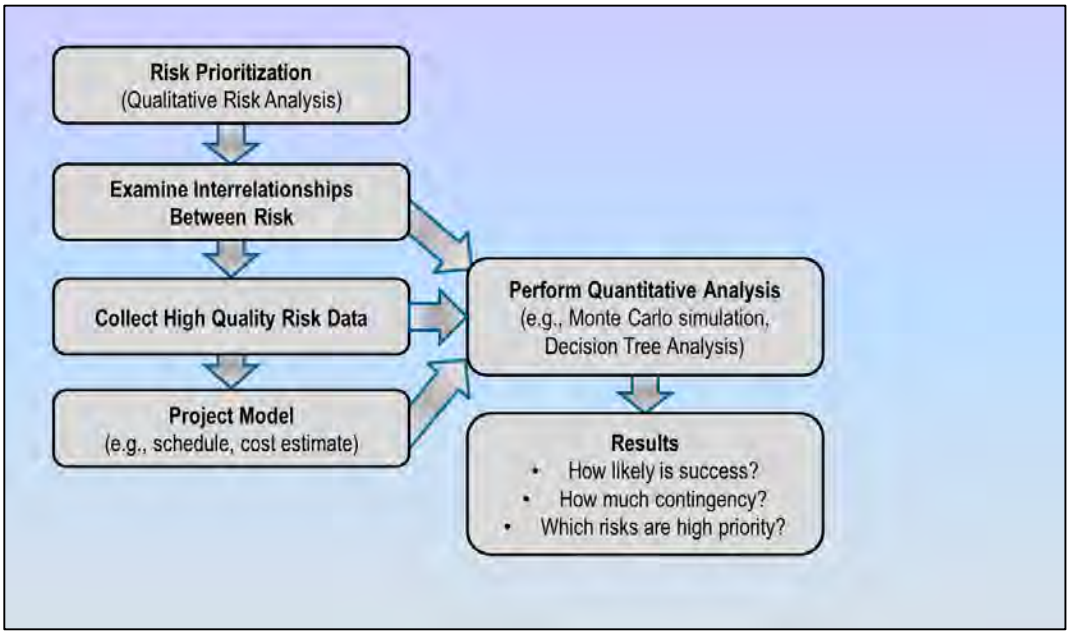

Figure 11 - Structure of Quantitative Risk Analysis

5.2.3 Plan Risk Response[v]

A risk response strategy will be developed for each risk and opportunity. Strategies for negative risks include:

- **Avoid**: Risk avoidance may be the most cost-effective strategy. It is most effectively developed during the early phases of the program or its components.
- **Transfer:** At the program level, risk interdependencies make the transfer of risk problematic. Careful evaluation for intentional exclusion or risk, or unintentional inclusion is necessary.
- **Mitigate:** Taking early actions to reduce the probability and impact of the risk on the program.
- **Accept:** Some risks cannot be eliminated or addressed through a viable strategy. These risks may require acceptance by not acting and dealing with the threats as they occur.

Strategies for positive risks (opportunities) include:

- **Share**: Outsourcing and making better use of external partnerships may be required in order to capture the opportunity.
- **Exploit**: Positive impacts to the program are possible, provided the necessary resources to realize the benefits exist.
- **Enhance**: Affecting key drivers to increase the expected value of the opportunity.
- **Accept**: This strategy indicates that the program team has decided not to change program plans and will deal with the opportunities as they occur.

A Risk and Opportunity Response Plan can be developed to establish how the project will alter the probability of a specific risk and the size of its Impacts by detailing the responses that will be carried out for the risk.

5.2.4 Monitor & Control Risks

Monitoring & Controlling of program risks will include the following tools and techniques.

- Audits
- Lessons learned reviews
- Monitor program environment
- Monitor legal issues and climate
- Risk and opportunity reviews and meetings

The trigger conditions are also monitored. If their status changes, then the trigger response will be employed.

5.3 The Aggregation of Risks and Opportunities

CNS recognizes the need to aggregate risk for the purpose of evaluating total risk exposure. Depending on the specific corporate or stakeholder interest, this will be done for the following categories:

- Project level
- Program level
- By facility
- By site
- At the enterprise level

Conversely, there may be times when aggregate risk needs to be disaggregated into individual risks, so a problem source can be isolated and addressed.

5.4 Enterprise Risk & Opportunity Management (EROM) Process

The objective of enterprise risk and opportunity management is to accept the right amount of risk commensurate with the anticipated reward, to deliver the optimum outcomes for the organization. Enterprise risk management differs from project and program risk management in that, in the right circumstances at the enterprise level, the organization may choose to actively embrace appropriate risk in anticipation of high rewards.

While programs and projects are concerned, for the most part, with risks and issues that are inside the specific program or project, the enterprise is concerned with:

- Maximizing value of the enterprise
- Tailoring the fit of the enterprise to the organizational strategy and objectives
- Determining how to balance the programs and projects within the enterprise given the organization's capacities and capabilities[vi]

Enterprise risk management includes providing contingencies across the threat pool. These are typically applied to threats with high impact and low probability.

5.4.1 EROM

The CNS approach to the management of enterprise level risk and opportunities has four stages: (1) risks are identified; (2) risks are analyzed; (3) risk responses are developed; and, (4) risks are monitored and controlled throughout the process. [vii]

- **Risk Identification**: Substantial enterprise risk is represented by the projects and programs. Additional risk that must be considered is enterprise structural risk. Structural

risks are those risks concerned with an organization's ability to organize its enterprise mission with the organization's hierarchical and clustered structures, which define the methods and approaches in which the organization operates and performs its tasks. The quality of the organization's enterprise management is also a factor for structural risk; governance and application of best practices may provide opportunities for improvement, whereas overambitious plans, as well as inconsistent or rapidly changing strategy, may present threats to success.[viii]

- **Analyze Risk:** Enterprise risk may be analyzed using a number of qualitative and quantitative assessment tools and techniques.
- **Qualitative Analysis:** Tools used here are similar to those previously mentioned. Qualitative analysis at the enterprise level is generally performed on all risk that is not first analyzed with quantitative analysis tools and techniques.
- **Quantitative Analysis**: Tools and techniques used here are normally designed to measure financial metrics such as return-on-investment (ROI), net present value (NPV), or payback period (PBP). One such tool is the multi-variable chart shown in Figure 12.
- **Response:** The risk response should include all trigger events, the trigger conditions, the predefined response plan (contingency plan) to be executed and any contingency reserves for schedule and cost.
- **Monitor and Control**: This is the process of monitoring enterprise risk and making recommended changes to the components consistent with the organizations risk tolerance. Risk responses will also be monitored to ensure that their desired result is achieved, making plan changes as necessary.

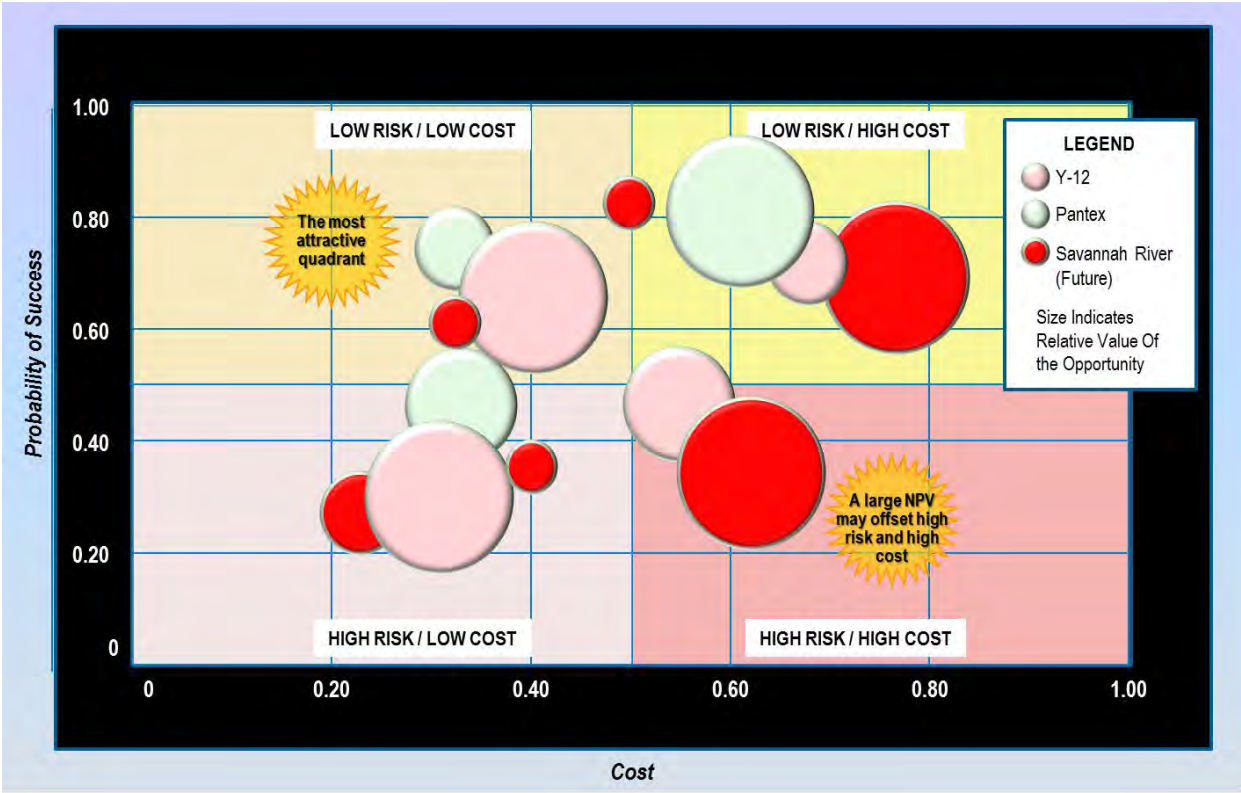

Figure 12 - Multi-Variable Bubble Chart Is A Tool That Can Be Used To Present Value As a Function of the Probability of Success (Risk) and Cost to Execute

5.5 Risk Management Tools

ARM® - Active Risk Manager - is being considered as the CNS EROM tool. ARM® is an industry-leading, off-the-shelf risk analysis software which has the capability to integrate our risk approach across all functions, groups, and sites.

5.5.1 Risk and Opportunity Management Governance

Management accountability / responsibility for CNS Enterprise Risk Management is delegated down from the COO, CNS to the Vice President of Mission Assurance, who is responsible for its successful execution.

CNS enterprise, risk and opportunity management shall be organized using Integrated Product / Process Development (IPPD) principles. Each Integrated Product / Process Team (IPT) is a multidisciplinary group of people who are collectively responsible for delivering a defined product or process. Every member of the team works from the same information and towards the same overall goals, utilizing the same reporting criteria and tools. Customer representatives and other stakeholder organizations will be present during meetings, which leads to:

- Fewer meetings
- Enhanced downward communication of requirements and upward communication of status and risk
- Enhanced horizontal communication which improves integration

Each team must have the right mix of expertise to master the different facets of risk associated with their business assignments. Members of each IPT must be empowered to make decisions for their

respective functional organizations.

While IPTs do not work in isolation, the best IPTs are able to make decisions with fewer consultations, reviews, and approvals with those outside the team. Thus they are not only more efficient; they are also more effective.

The goal is to manage issues at the lowest level possible, commensurate with the level of risk.

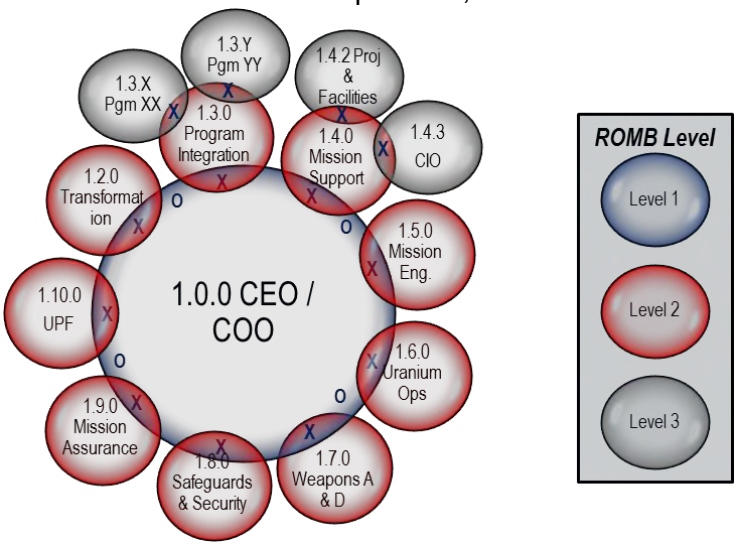

Figure 13 - Risk & Opportunity Management Board Structure

IPTs are formed around the organizational RBS, which is closely aligned to the WBS and the cost accounting system.

The IPTs are structured to define the relationship between top-level and sub-tier teams. When risks remain unresolved (due to lack of resources, higher priorities, etc.), the risk specialist ensures that these risks are escalated progressively higher on the authority scale until resolution can be achieved. Escalation procedures will be in place to allow risks to be assessed as necessary for possible impact across the organization.[ix]

5.5.2 Risk and Opportunity Management Boards (ROMB)

After concurrence by the project / program team, or functional leadership each risk or opportunity is nominated, with consultation of the risk manager. Once accepted by the appropriate Risk and Opportunity Management Board (ROMB), risks and opportunities become part of the active risk and opportunity database. There will notionally be a ROMB for levels 1, 2, and 3 (Re: Section 5). The Project / Program Manager or functional leadership has ultimate oversight of the risk-management process and applies resources as necessary to create successful outcomes. The customer has visibility into all risks, with the exception of CNS corporate level strategic risk, which will be managed out of a separate risk register.

The ROMB integrates risk mitigation activities across all teams. Whenever a risk or opportunity nomination is accepted by the ROMB, its assessment, risk response strategy, and plan are performed, reviewed, and either accepted or sent back for rework. If accepted, it is baselined and future assessment and mitigation updates are provided by the assigned owner (individual and team).

The number (levels) of review board levels will change across the WBS, based on size and

complexity.

6.0 COMMUNICATIONS

Proactive communications about transformation initiatives and merger activities are essential to CNS success and achievement of future state vision and goals. CNS provides dedicated communication resources and vehicles to develop engaged, educated and integrated stakeholders, with shared support for transformation goals and initiatives. Ultimately, frequent and transparent communication ensures employees understand their role in NNSA's nuclear security mission.

Leadership is responsible for communicating a uniform and articulate foundational approach to the CNS strategy, mission and vision of transformation. The CNS leadership team communicates a compelling and consistent case for change to employees. Strategic communication planning efforts align leadership messages and identify opportunities for executive engagement to reinforce transformation objectives.

Effective communication ensures key messages penetrate all levels of the CNS enterprise, to include internal and external stakeholders. Stakeholder communication requirements must be understood, mapped and maintained, ensuring informational needs are met. Targeted and tailored tools assist managers and supervisors to communicate to the workforce on complex initiatives, and feedback loops gauge the receipt of such messages. Specific messages are created and released within single mission areas, whereas messages around enterprise-wide topics are released to broader audiences. Communication vehicles include emails, newsletters, website posts, verbal engagements and executive engagements.

In addition to the focus on communication with key stakeholders, to maintain our focus on EROM, we discuss risks at staff meetings, progress and readiness reviews, and dedicated risk status meetings, initiated by our Risk Manager or any other member of the leadership team with a concern. These meetings encourage open discussions of risk-triggering events, the effectiveness of planned responses, and areas where help might be needed. We also discuss critical risks in the project management monthly report to NNSA. In addition to reviewing newly identified risks, evaluating and reviewing the range of risk information, approving mitigation strategies, and monitoring progress, the Risk Manager routinely assesses the effectiveness of completed mitigations to provide lessons learned for continuous improvement. Project risks and mitigation measures are communicated to and from our employees so that everyone clearly understands risk issues and mitigation actions. Workers are actively involved in identifying and mitigating risks in work planning and feedback during pre- and post-job briefings.

7.0 COMPANY REACH BACK

The parent companies of the CNS joint venture will support the initial risk and opportunity management system readiness review and conduct periodic assessments throughout merger and transformation. CNS will routinely reach back to the parent companies for lessons learned, response strategies, consultation on risk management process improvements, or tool enhancements. The parent companies will also augment CNS human resources as needed; e.g., subject matter experts for unique situations, and surge capacity to quickly address large risk management concerns.

The four CNS parent companies are well aligned culturally, have experience working together, bring complementary merger/consolidation experience, and have the core competencies needed to transform Y-12 and Pantex into an efficient enterprise. Specifically:

- Bechtel is a global firm that understands the NNSA missions from its management roles at Y-12, Pantex, Los Alamos National Laboratory (LANL), and Lawrence Livermore National Laboratory (LLNL). It will balance the drive for change with the need to protect mission continuity and certainty. Bechtel also brings the most relevant merger experience in DOE/NNSA today from its recent Knolls/Bettis consolidation as well as from the Nevada Test Site (NTS, now named the Nevada National Security Site or NNSS) where it merged three contractors at five sites into one contract, saving $468 million.
- Lockheed Martin brings new perspectives to the NNSA production enterprise from the Fleet Ballistic Missile program, where it conducts final assembly of all Trident nuclear weapons. From the Atomic Weapons Establishment (AWE), it brings best practices from the UK's equivalent of the NSE. From Hanford, LM knows how to integrate and provide support services to multiple contractors working across a geographically dispersed area. It has also performed numerous mergers for customers such as the Federal Aviation Administration where it consolidated 57 flight service stations into 6, reducing operating costs by $2.1 billion over 10 years. LM has also been the #1 provider of IT services to the U.S. government for 17 years and is ready to help NNSA deploy enterprise-wide IT systems, telepresence solutions, and other communication innovations to further enable One NNSA.
- ATK has worked with LM on the Trident program for 50 years and has successfully merged numerous companies including Hercules Aerospace and Thiokol Propulsion to become the world's largest supplier of solid propellant rocket motors and ammunition, and a leading provider of high-performance composite structures. It also merged operations at two large energetics sites under one management structure to reduce duplication and achieve substantial cost reductions. In addition, ATK dramatically cut its munitions production costs to remain competitive in a highly challenging commercial marketplace, a very useful fresh perspective. ATK will bring its energetics, high-hazard operations, and continuous improvement expertise to the production enterprise through numerous essential personnel integrated into the organization at various levels to facilitate top-to-bottom culture change.
- While Bechtel, LM, ATK, all bring relevant, successful transformation experience to CNS, we also know that over 50% of all mergers fail to meet their stated goals. To help ensure we deliver for NNSA, CNS preselected Booz Allen Hamilton (BAH) as a teaming subcontractor to guide our consolidation efforts. BAH has helped over 600 customers plan and execute acquisitions, mergers, and business restructurings. Its proven suite of tools and approaches will be invaluable in smoothing and streamlining the merger of Pantex and Y-12 (and SRTO) and creating a cohesive production enterprise. BAH will also help CNS leverage its corporate parents' presence at LANL, LLNL, and Sandia to assist NNSA in accelerating its "One NNSA" vision beyond the production plants.

8.0 PERFORMANCE EVALUATION PLAN

CNS recognizes that NNSA expects the MTP to include Performance Fee Incentives, with associated objectives, measures, and targets to be considered for inclusion in the Contract's Performance Evaluation Plan (PEP), which may be multi-year, and be used as consideration for additional Contract term. The development of the PEP is an ongoing effort that is anticipated to be completed prior to the end of contract transition. CNS will propose a revision to the MTP, as appropriate, based on the final negotiated PEP.

9.0 CNS APPROACH TO COST SAVINGS

In its proposal, CNS identified $3.27 billion in savings over the 10-year contract period. Our confidence in our ability to deliver those savings was based on the following facts:

- We were deliberately conservative in our assumptions and constrained our savings initiatives to areas we could implement under our own authority as the M&O contractor.
- We focused on mission support functions and were deliberately conservative regarding security and the missions.
- We used proven merger, transformation, and continuous improvement tools provided by Booz Allen to perform our analyses.
- Our initiatives increase mission productivity and in partnership with NNSA, will use value stream mapping to pursue further transformative changes to the missions.

The driving force behind the CNS cost savings effort is the portfolio of cost restructuring initiatives that will be included in the CRP. To identify and quantify these initiatives, CNS follows processes derived from Booz Allen's experience guiding hundreds of mergers, consolidations, and restructurings of major corporations and government enterprises. In developing the MTP during the procurement process, we identified 62 different initiatives that were described in the proposal. These initiatives were derived from the principles shown in Figure 14 below.

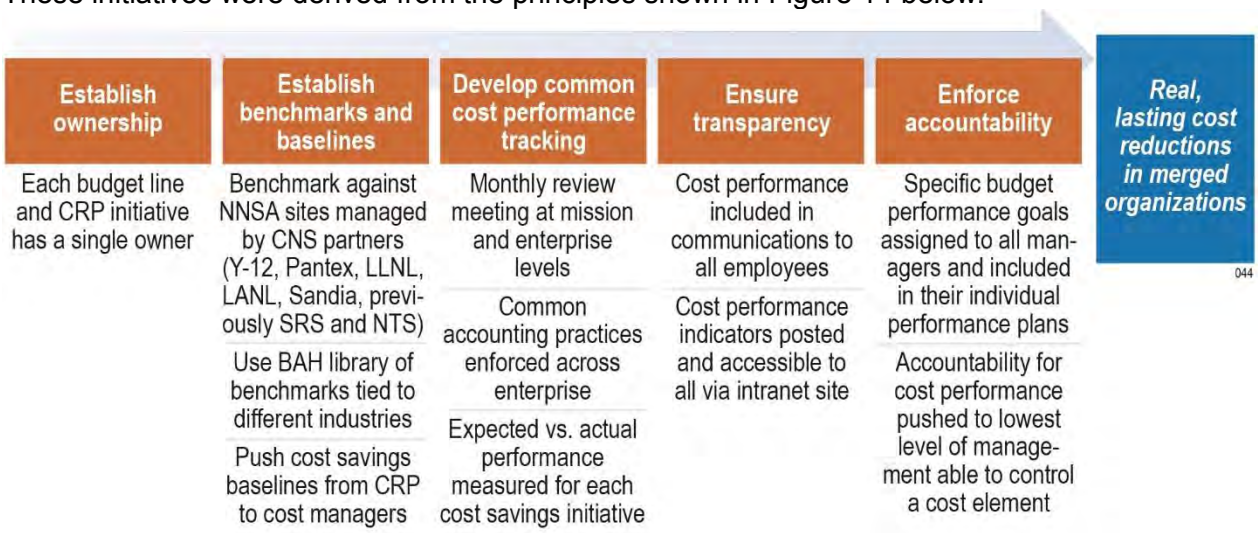

Figure 14 - Principles for Successful Merged Organizations Performance Based Leadership

CNS has learned from the corporate Six Sigma, LM21, and PES programs that we cannot engage employees in a complex transformation program by intimidation. We must have voluntary buy-in to maximize discretionary effort and engagement. Further, we have found that managers do not always understand how to best motivate their employees to win this buy-in. For that reason, CNS' Enterprise Excellence (E^2) deployment process will include training in Performance-Based Leadership (PBL). PBL, a leadership toolkit taught and used across Bechtel, is a general management approach and philosophy that helps managers get the best from their employees—including getting buy-in to E^2. PBL is very different from other leadership formulas promoted across corporations today. It is based on behavioral science, and focuses attention on how results are achieved. Discretionary performance can best be described as the extra level of effort people contribute when they want to do something as opposed to when they are told to do something. PBL tools can help create an environment where colleagues are open to feedback, engaged in a continuous and productive behavioral improvement process, share and ultimately benefit from achieving mutual goals

PBL will be introduced to the production enterprise through a train-the-trainer process in classroom settings, or online through the Internet-based Bechtel University. Some Y-12 and Pantex incumbent managers have already received PBL training; refresher training will help reinvigorate their PBL skills. PBL will be used to foster and maintain a workplace culture with a bias toward change that will markedly increase buy-in to the CNS E^2 Program and help institutionalize a long-

term commitment towards excellence and continuous improvement. This commitment will yield enduring improvements in mission delivery.

Through PBL, leaders learn to utilize discrete tools to motivate, engage, align, and reward employees. PBL incorporates the following actions, which are outlined in Figure 15.

DCOM	ABC	Norms of Objectivity	Pinpoint Behaviors
Use: To help supervisors provide clearly understood work directions and feedback **D—Direction** ◆ Do your people know what you want them to do and why? **C—Competence** ◆ Do they know how to do the task? **O—Opportunity** ◆ Do they have the resources (time, tools, money, people) required to perform the assigned work? **M—Motivation** ◆ Do they get feedback so they know what to keep doing or what to do differently? Addressing these four elements will cover about 80% of the root causes of poor performance on the job.	*Use: To understand and influence behavior* **A—Antecedents** ◆ Events that precede or prompt behavior ◆ 20% influence on behavior **B—Behavior** ◆ What a person does or says **C—Consequences** ◆ Events that follow behavior ◆ Increase, maintain, or decrease behavior ◆ 80% influence on behavior	*Use: To describe behaviors objectively (just the facts)* **N—Not an Interpretation** An unbiased statement about behavior **O—Observable** Behaviors seen/heard **R—Reliable** Two or more people agree on what they observed **M—Measurable** A number can be used to describe important aspects of a behavior or event **S—Specific** Detailed description as to what happened, who was involved, when, where, and the sequence	*Use: Specify the few critical behaviors that most impact the desired results (80/20 rule)* ◆ Be specific about the desired results ◆ Specify the key behaviors and performer(s) that most impact the desired results ◆ Describe the key behaviors objectively (avoid labels) ◆ Evaluate changes in behavior against changes in result

Figure 15 – Management Principles for Driving Cost Reductions

- **Goals:** Define and prioritize what needs to be done to improve strategic business success. These goals are related to the organization's (and the leader's) performance objectives, which are tied to the leadership team's compensation. By leaders communicating goals, the workforce will increasingly understand the impact of their behavior and daily work and adopt the mindset that change must occur.
- **Behaviors:** Pinpoint the human behaviors needed to improve engagement, motivation and the use of core processes and to achieve specific business results.
- **Analyze:** The work environment is analyzed and analysis performed to identify factors that encourage or discourage the desired behaviors.

Coaching	Giving Feedback	Receiving Feedback	
The purpose of coaching is to improve performance. Feedback is the primary coaching tool. Feedback is information given to an individual or team about their behaviors and their impact. **Ten Basic Principles of Feedback** ◆ Provide NORMS-based feedback ◆ Deliver immediately after behavior is seen/heard ◆ Confirm the receiver is ready to receive feedback ◆ Treat the person with dignity and respect ◆ Focus on behavior and not on the person/personality involved ◆ Practice "Active Listening" ◆ Ask questions to confirm and/or clarify ◆ Use "I" messages: "I saw..., I heard..." ◆ Listen to the receiver's response ◆ Deliver in person whenever possible	**Giving CONSTRUCTIVE Feedback (to encourage people to change an undesired behavior)** ◆ State the current behavior and the desired behavior objectively (just the facts) ◆ Describe the adverse impact of the current behavior to the job/team/you ◆ Ask the person for an explanation of their current behavior and actively listen ◆ Ensure the person knows what to do differently, why, and how to do it ◆ Follow up—when you observe the desired behavior provide positive feedback **Giving POSITIVE Feedback (to encourage people to repeat a desired behavior)** ◆ State the specific behavior objectively (just the facts) ◆ Describe the positive impact of the behavior to the job/team/you ◆ Encourage the person to keep doing the behavior in the future	**Receiving CONSTRUCTIVE Feedback** ◆ Listen closely to the other person ◆ Ask questions to clarify and to understand the feedback ◆ Avoid being defensive ◆ Thank the feedback provider for their feedback ◆ Think about the feedback you have received before changing your behavior **Receiving POSITIVE Feedback** ◆ Say, "Thank You"	**Performance-Based Leadership** Leadership, the ability to influence others, is critical to Bechtel's business success. Effective leaders get results and create motivating work environments that enable people to bring their best ideas, work efforts, and teamwork to the job. Using PBL tools in this pocket job aid can help you become a more effective leader.

Figure 16 – Management Principles for Performance Based Leadership

- **Change:** Based on the analysis, an action plan is established to change the work environment and consequently increase the probability of the desired behaviors occurring, leading to the desired results they would produce. This change process relies on leaders applying the seven tools of PBL to achieve the desired results.

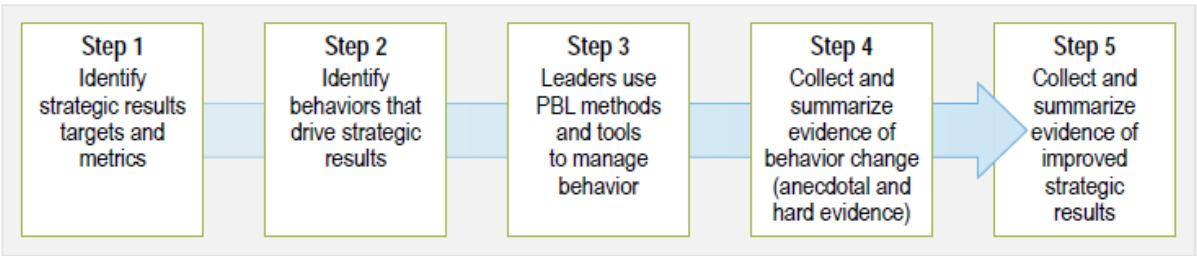

Figure 17 – Performance-Based Leadership. CNS has adopted Bechtel's proven, scientific approach to behavior change, which will be vital to establish a culture of continuous improvement across sites.

- **Measure:** The outcomes need to be continuously measured and reported – both behavior change and business impact. Since goals are established and flowed down through the organization, comparing the performance measurements to these goals helps the leadership team and the increasingly engaged workforce to self-monitor and self-manage, facilitating continuous improvement at the same time that leaders remain accountable for results. This feeds into the concept that PBL is successful because employees want to do something versus being told to do something (commitment versus compliance).
- **Celebrate and Reward:** PBL augments the culture of employee engagement with one where employees are rewarded for meeting and exceeding goals. The CNS team in fact has a budget for formal recognition programs, in addition to a leadership mindset that values regularly recognizing good work.

THE SEVEN TOOLS OF PERFORMANCE BASED LEADERSHIP:

1. Coaching
2. Giving Feedback (both constructive and positive)
3. Receiving Feedback
4. DCOM supervisory tool (Direction/ Competence/ Opportunity/ Motivation); addresses 80% of root causes of poor performance
5. ABC Tool for understanding and influencing behavior (Antecedents/ Behavior/ Consequences)
6. NORMS of Objectivity (Not an interpretation/ Observable/ Reliable/ Measurable/ Specific)
7. Pinpoint Behaviors (the critical few behaviors that impact the desired results following 80/20 rule)

Figure 18 – The Performance Based Leadership Toolkit provides leaders with specific tools for coaching their team in order to achieve results and motivating work environments.

10.0 METHODOLOGY USED TO DEVELOP PROJECTED COST SAVINGS

To effectively deliver the mission consistent with its values, CNS recognized the need to carefully examine the cost savings available. CNS leveraged Booz Allen's expertise in cost restructuring engagements including mergers, transformations, and continuous improvement to systematically investigate potential cost reduction initiatives.

To initiate cost savings, CNS first engaged the complete CNS leadership team in a fact-based discussion on values, principles, goals, and expectations for the new contract and the challenges inherent in managing geographically separated sites as a single enterprise. From this discussion, our key personnel developed a common vision and mission for change that embodies the magnitude and timing of the cost and performance challenges. This executive-level dialogue is ongoing and continually guides the transformation as it progresses toward success.
CNS employed both top-down and bottom-up approaches to identify and isolate cost savings through all levels of the organization. Top-down approaches include comparisons of spending in overhead, mission support, and mission-performing functional areas. Spending quantities and the ratios of spending in various functional areas ratios allow CNS to identify opportunities to reduce department sizes without sacrificing the performance of the organization.

Analysis of the organizations' supervisory spans and layers further reveals middle-management areas which can be optimized for greater performance. Bottom-up analysis such as a detailed analysis of benefits, management operational policies, and incentive structures allow CNS to propose changes to policies that will align existing organizational behaviors with CNS and NNSA interests. These methods helped identify redundant or less efficient technical and business operations across the sites, which serve as the basis for cost reduction opportunities. Additionally, the continuous improvement methodologies to be implemented will continue to search for, uncover, develop solutions for, and achieve savings in these areas over the duration of the contract

operations. In developing the cost savings estimates, CNS identified the recurring savings that would be taken from selected actions.

11.0 CNS PROPOSAL PROJECTED COST SAVINGS (PCS) AND INCENTIVE FEE

As noted above, CNS developed an initial cost restructuring portfolio consisting of 62 cost CRIs previously identified in the proposal which CNS submitted to NNSA. The CRIs encompass both intensive and extensive changes to the organization: initiatives change the cultural qualities of the organization as well as the size and shape of the organization. Various CRIs utilize economies of scale, differences in regional economies, competitive market landscapes, and management best practices across all functional areas in the organization. These CRIs were developed by general management consultants and vetted by functional experts who excel in their respective fields. As part of CNS' management review, the initiatives are considering the staffing levels in critical skill areas to ensure they do not drop below levels necessary to maintain these capabilities. This analysis is undertaken with HR and the CNS functional leaders to identify critical skill needs and existing talent pools. The Staffing Plan, as submitted by CNS during Transition, reflects this detailed review of the site skill mix and targeted effort to protect the necessary skills in the workforce. It should be noted that the cost savings approach of CNS will further protect and strengthen these critical skills over time. By freeing additional funding to CNS and NNSA reinvesting in needed skill sets where there are shortages, we will trim areas where skills are in excess of required capacity.

CNS created a CRI data template to systematically collect data regarding all aspects of each CRI relevant to CNS and NNSA, including:

- The amount of savings available
- Amount of investment required to achieve the savings
- Actions required to achieve the savings
- A timeframe of recouping costs
- Potential risks that could affect the expected savings of the CRI
- Actions that CNS would take to mitigate these risks

CNS used proven, commercially oriented merger and transformation processes to identify savings of $3.27B

- Streamlined staffing to focus on critical skills for mission delivery
- Adjusted benefits and employee leave policies to make them more consistent with industry trends
- Merged and consolidated functions with standardized processes
- Eliminated unnecessary activities and "shadow" functions
- Improved purchase pricing through volume-leveraged procurement
- Selective outsourcing for greater efficiency
- Enabled higher utilization rates through cross-training and flexibility
- Applied historical savings to account for more effective operations due to continuous improvement via E^2

The identification, evaluation, and mitigation (as needed) of the risks in the CRIs are key aspects of ensuring the effective merger and transformation of the sites without negatively impacting the sites' missions. The CNS team members' decades of experience in leading and executing mergers and transformations, as well as their experience in managing and operating high-hazard operations are another aspect of mitigating risks to mission operations from the merger and transformation activities. Analyzing the cost restructuring portfolio allows CNS to forecast annual savings over the next 10 years. Savings are shown in Figure 19, reflecting savings as outlined in the proposal.

NNSA has designed and executed an innovative and well-structured contract for the Management and Operation of the Y-12 National Security Complex and the Pantex Plant. The contract strongly incentivizes CNS to identify and implement cost savings initiatives while maintaining a clear and appropriate focus on the safe and secure delivery of the mission. In accordance with the terms of the solicitation, CNS proposed sharing 35% of non-benefit-related savings for the first two years after the implementation and resulting verification of the associated cost reduction initiative. CNS further proposed that it would take no fee share from savings that resulted from the market based restructuring of employee benefits. This competitive approach enables CNS to return 92% of total savings to NNSA for release, reinvestment or reprogramming without betraying any commitments to safety or security. The projected cost savings and associated CSIF are shown in Figure 19, which separates savings from benefits and non-benefits savings and demonstrates CNS fee, which is taken on non-benefits savings only.

In addition to the proposed savings, CNS committed to providing rigor and transparency to the management of the cost savings program. This rigor and transparency is embodied in our approach to the Annual Controlled Baseline (ACB) and our use of appropriate management tools and systems to track and report savings. Our first-of-a-kind ACB includes an organizational cost baseline that provides a direct measure of savings and markedly increased detail on labor, material, subcontracts, and other expenditures. Recognizing that Earned Value Management System (EVMS) is a project management technique that is not intended to be a substitute for robust business financial management systems, CNS will utilize its certified EVMS system to execute line item and other capital projects as described below.

Our approach places equal emphasis on managing and tracking all elements of cost including direct, indirect, projectized level of effort, subcontracted, etc., and we will use our integrated processes (ACB, CRP, CRIs) to track and status all cost savings initiatives regardless of source or type. CNS originally proposed using a certified EVMS system to track and status all cost savings. This approach was based on a limited understanding of the site work, the existing degree of “projectization” of the scope, and the level of detail available in the planning process. During transition, CNS therefore modified its approach to employ our certified EVMS systems when it makes the most sense based on a requirement or to track a specific project with sufficient complexity to warrant the need for this level of detail (e.g. Life Extension Programs, Capital Reinvestments). The intent of our approach, however, remains the same in that we will place an equal emphasis on managing and tracking all elements of cost. We will develop and deploy systems to collect and integrate cost and accrual information from across the enterprise for analysis to support the management of the cost savings program and ensure the defensibility of the savings claimed.

Requirements for tracking cost reduction initiatives and segregating claimed savings have evolved significantly since the proposal was written. All CNS Cost Reduction Initiatives (CRIs) will be tracked through the Finance and Business Operations (FBO) Cost Savings Database. Each CRI has a B&R funding profile associated with it based on the savings generated and the benefitting program. The CRI will be tracked by the B&R funding profile and the cost savings will be segregated by the amount paid to CNS in cost savings incentive fee, the amount available for reinvestment, and the amount to be returned to NNSA. Based on transparency requirements, CNS has also developed an approach to create reserves inside and outside the ACB to provide visibility and transparency to the savings. The savings database is linked with this effort to provide the required tracking. Additionally, each CRI will be tracked for the life of the contract.

Benefit Savings		Base Years ($K) 1	2	3	4	5	Option Years ($K) 6	7	8	9	10	Total Savings	Cumul. Savings
CRP Savings *Note 1*	**TY$**	**30,936**	**29,387**	**−5,154**	**11,705**	**7,648**	**4,595**	**3,150**	**3,132**	**3,225**	**1,601**	**90,226**	**713,457**
Offeror Share in Savings *Notes 2, 3*	%	0	0	0	0	0	0	0	0	0	0		
	$	0	0	0	0	0	0	0	0	0	0	0	
Share in Savings Period	yrs	0	0	0	0	0	0	0	0	0	0		
Savings to the Government *Note 1*	TY$	30,936	29,387	−5,154	11,705	7,648	4,595	3,150	3,132	3,225	1,601		713,457

Other Savings		Base Years ($K) 1	2	3	4	5	Option Years ($K) 6	7	8	9	10	Total Savings	Cumul. Savings
CRP Savings *Note 1*	**TY$**	**61,255**	**59,042**	**74,759**	**46,599**	**30,436**	**20,605**	**21,291**	**19,906**	**20,463**	**21,101**	**375,457**	**2,560,749**
Offeror Share in Savings *Notes 2, 3*	%	35	35	35	35	35	35	35	35	35	35		
	TY$	21,439	42,104	46,831	42,476	26,962	17,864	14,663	14,419	14,129	21,933	262,820	
Share in Savings Period	yrs	2	2	2	2	2	2	2	2	2	2		
Savings to the Government	TY$	39,816	16,938	27,929	4,124	3,474	2,740	6,627	5,487	6,334	-832		2,297,929

Total CRP Savings		Base Years ($K) 1	2	3	4	5	Option Years ($K) 6	7	8	9	10	Total Savings	Cumul. Savings
CRP Savings *Note 1*	**TY$**	**92,191**	**88,429**	**69,606**	**58,305**	**38,084**	**25,200**	**24,441**	**23,037**	**23,689**	**22,702**	**465,683**	**3,274,206**
Total Savings to the Government	**TY$**	**70,752**	**46,325**	**22,775**	**15,829**	**11,122**	**7,336**	**9,777**	**8,619**	**9,560**	**769**	**202,863**	**3,011,386**

Figure 19 – Projected Cost Savings (PCS) (CNS Contract Proposal) ($K)

Note 1: Benefit savings and CRP Savings are calculated based on the difference of savings from that year minus the previous year. Negative values indicate that the overall savings that year are lower than the previous year (it could be due to execution cost of new CRIs).

Note 2: Cumulative CSIF is a summation of the savings in each Contract Year listed in the table.

Note 3: Fee for a given year is calculated by 0.35 * [(Total new savings for year n – Benefits new savings for year n) + (Total new savings for year (n-1) – Benefits new savings for year (n-1)]. Year 10 fee is 0.35 * (Total new savings for year 9 – Benefits new savings for year 9) + 0.7 * (Total new savings for year 10 – Benefits new savings for year 10) to accommodate the equivalent of two years of fee from year 10.

For savings proposed in conjunction with the MTP, and as stated in the Contract's Section I Clause entitled "DEAR 970.5215-4, Cost Reduction" CNS will certify the amount of savings achieved and sustained from prior periods after which savings will be validated by the Contracting Officer as required by contract. This will ensure that there is no negative impact to NNSA mission deliverables.

12.0 ASSUMPTIONS USED TO DEVELOP CNS PROPOSAL PROJECTED COST SAVINGS (PCS)

The assumptions underlying the CRIs included in CNS' proposal were carefully documented in the CRI data template to ensure that emerging conditions do not disrupt anticipated savings. These assumptions have been examined to ensure that they are sufficiently conservative to incorporate into the CNS decision-making process. CNS analysis originally assumed:

- Savannah River Tritium Operation (SRTO) option awarded during Year 1, and savings would start at the beginning of contract Year 2 (July 1st, 2015).
- CNS has used a historical severance cost.
- CNS has used an annual inflation rate for labor and non-labor cost in alignment with the inflation data provided by NNSA in the 10 year funding projections.

These assumptions were considered to be conservative estimates. Despite its inevitability, no voluntary attrition is assumed to contribute to workforce reductions and a severance cost is deducted from the savings for each FTP reduction which is also equivalent to a headcount reduction[4]. The salary raises are consistent with the inflation rate assumed by CNS during the proposal phase.

When CNS reports net savings, the calculations include only hard savings values that are less the required investment to achieve them. All of the CNS cost savings initiatives submitted to date are funded through efficiencies that we create. The claimed savings are net of execution costs. No new funding is necessary for the initiatives planned in order to achieve the proposed cumulative savings to the Government. Details about execution costs will be contained in the CRP. In accordance with the Contract's Section I Clause entitled "DEAR 970.5215-4, Cost Reduction" "[t]he Government makes no commitment to fund implementation costs but will consider those within budget on the merits of the savings proposed."" However, it is assumed that site funding will continue to provide funding to support NNSA-directed actions and scope. For example, funding for facility replacements or capacity enhancements directed by NNSA, such as UPF, are not included as an expected investment by CNS, but instead are funded by NNSA. Similarly, an NNSA requirement to convert all NNSA site ERP systems to a common platform would be assumed to be contained with CNS site scope, or if changes are so significant that they are outside of current scope, an increase in funding or adjustment of existing funding priorities will occur in coordination with NNSA.

13.0 THE ANNUAL CONTROLLED BASELINE AND THE BASELINE CHANGE CONTROL PROCESS

13.1 The Annual Controlled Baseline

Developing and maintaining accurate baselines is crucial to the success of this contract. In addition to being our roadmap for the way we accomplish the work, including scope, cost and schedule. The baselines accurately document what it would have taken to do the job without the merger, consolidation and transformation actions. The baselines must be maintained over the life of the contract to document the annual and cumulative savings achieved by the contract consolidation. They must be accurate and defensible as billions of dollars of cost will be incurred

[4] Since a significant amount of work at Y-12 and Pantex is accounted for through overtime, analyzing overall reductions through FTPs instead of FTEs accounts for the overtime effort.

and billions of dollars in savings will be released, reinvested or repurposed based on these baselines.

The annual controlled baseline referred to and described in prime contract section I-19 (DEAR970.5215-4) consists of three baselines: the initial baseline, the annual controlled (or current) baseline, and the proposed (or feasibility assessment) baseline. These three baselines are necessary to enable tracking of changes each year as well as over the life of the contract.

CNS has adopted a phased approach to implementation of the Annual Controlled Baseline (ACB) required under NNSA's Consolidated Production Contract. This approach is consistent with the phased approach being utilized to consolidate the Pantex and Y-12 financial processes and systems. Once fully operational, the CNS model of managing scope and measuring cost savings will consist of the following components:

1. **Initial Baseline**
   a. **Purpose**: The initial baseline serves as the starting point for the measurement of the CNS contract cost savings.
   b. **Content**: The initial baseline consists of the mission baseline and cost baseline based on prior actual costs to deliver the mission scope. The costs are shown on an annual basis in then-year (i.e., current) dollars.
   c. **Change Criteria**: The initial baseline will be defined and agreed upon between NNSA and CNS and will be subject to change based on scope changes and inflation.

2. **Annual Controlled Baseline (ACB)**
   a. **Purpose**: The ACB is a verifiable description of the current scope of work, cost, schedule, and risk. The ACB excludes CRIs to be executed in the upcoming year, enabling comparisons to the proposed baseline that include upcoming CRIs.
   b. **Content**: The ACB consists of the mission and cost baselines defined below:
      i. **Mission Baseline**. The Mission Baseline includes spend plans by Budget and Reporting (B&R) code and Obligation Control Limit (OCL). The mission scope is identified through the Prioritized Project List (PPL). It also defines the resources required to achieve the scope as well as associated deliverables and risk.
      ii. **Cost Baseline**. The Cost Baseline describes the annual costs and headcount needed by CNS Organization to achieve the mission baseline Costs within this baseline are broken down into labor, fringe, materials, subcontractors, etc., for each functional organization.
   c. **Change Criteria**: The ACB is developed annually and is included in the CRP. The ACB may need to be updated during the fiscal year to incorporate scope changes that may have occurred due to a delayed budget approval (e.g., as a result of a continuing resolution) or other mid-year funding adjustment.

3. **Proposed Baseline**
   a. **Purpose**: The Proposed Baseline is the cost baseline adjusted to reflect the expected savings from the CRP.
   b. **Content**: The Proposed Baseline includes the Cost Baseline of the approved ACB that has been adjusted based on the implementation of the CRIs planned to be executed during the upcoming year. It reflects the target costs that each CNS Department must achieve by the end of each fiscal year. The difference between the ACB and the Proposed Baseline reflects the expected CRP savings.
   c. **Change Criteria**: The Proposed Baseline is updated initially within the July 1, 2014

CRP (see Figure 20 below) and then on an annual basis at the beginning of each fiscal year. The Proposed Baseline may need to be updated during the fiscal year to incorporate scope changes that have occurred due to a delayed budget approval or other mid-year funding adjustment, to incorporate a CRI to be executed in the current year that was not included in the CRP, or to incorporate a CRI that requires modification during the year.

4. **Baseline Change Proposals (BCPs)**
Scope changes to the mission baseline will require that a Baseline Change Proposal (BCPs) be developed and approved through the Change Management Council (CMC). Once the BCP is approved by CMC and NNSA, any of the baselines will be adjusted as needed, including scope, cost, headcount and/or risk.

5. **Cost Reduction Proposal (CRP) and Cost Reduction Initiatives (CRIs)**
Define the proposed merger, transformation and continuous improvement actions that CNS is taking to reduce the current baseline cost in a particular program, project or organizational area. The CRP will include both the CRIs and the ACB and will be updated at least annually. The CRIs will be tracked against the Annual Controlled Baseline and will be the mechanism for measuring and validating cost savings for the year.

6. **Change Management Council (CMC)**
Review and approve all changes to mission budgets, scopes or CRIs. Approved changes may result in adjustment to one or more of the three baselines (Initial, Annual and Proposed) and may require NNSA approval.

A graphical representation of the three baselines are shown in Figure 19.

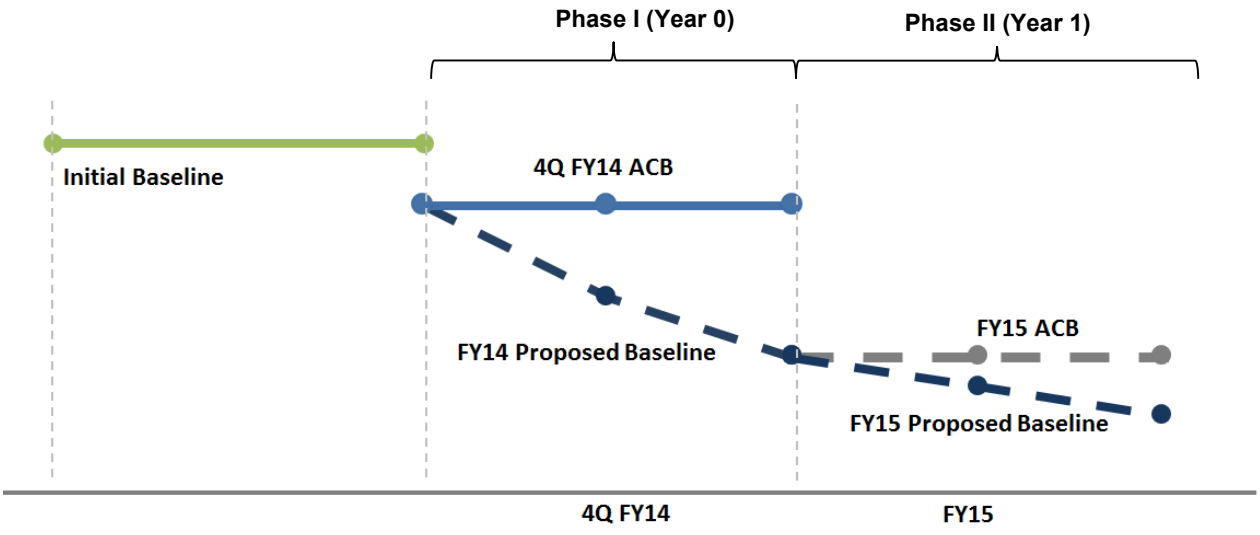

Figure 20 - Illustration of Baselines (Initial, ACB and Proposed)

13.2 Current State

Currently both Pantex and Y-12 have a Mission Baseline for FY14 which is reflected in the Prioritized Project Lists (PPLs). However, organizational detail and rigorous change control over the baseline is not in place at the level that is required to validate cost savings. Neither site

currently has an updated cost baseline that, together with an updated mission baseline, would form an operative ACB that could be directly adopted for the CNS contract. Further, both sites operate on different financial systems and with different cost models that complicates the management and control of a unified baseline. Consequently, CNS has designed an approach to developing and implementing the ACB to work within these current conditions while still providing NNSA a verifiable basis to measure and validate cost savings.

13.3 Phases in the Development of the ACB

13.3.1 Phase I: 4th Quarter FY14 Jul 1 – Sep 30, 2014

Phase I is referred to as year zero in the Merger Transformation Plan.

- **Mission Baseline:** Exists for each site but no rigorous scope definition, change control process or risk analysis process is currently in place.
- **Cost Baseline:** Does not exist by organization. CNS will provide the Estimate To Complete (ETC) the remaining scope for the 4th Quarter of FY14.
- **Cost Reduction Initiatives (CRI):** There are a number of cost reduction initiatives, which impact Phase I and will be documented in the Cost Reduction Proposal (CRP). The CRP will be submitted prior to the start of the period and will include a final ACB and a proposed baseline showing the anticipated cost reduction for the 3-month period.
- **Change Management Council (CMC):** To be implemented at the beginning of the period to manage changes to the Mission baseline and CRIs for the period.
- **Cost Models:** Different ones exist for this period at the two sites, but there is an approved CNS disclosure statement.
- **Financial Systems:** Two separate financial systems exist but data will be consolidated for reporting and ACB performance tracking and verification purposes.

13.3.2 Phase II: FY15 Oct 1, 2014 – Sep 30, 2015

- **Annual Controlled Baseline (ACB):** Will be established and submitted at the beginning of the FY and will consist of the following:
    - **Mission Baseline**. The Mission Baseline includes costs based on standard rates by Budget and Reporting (B&R) code and by functional organization. The mission scope will be identified through the Prioritized Project List (PPL), along with the resources required to achieve the scope, deliverables, and a risk associated with each PPL is defined.
    - **Cost Baseline**. The Cost Baseline describes the annual costs and headcount needed by CNS Organization to achieve the mission baseline Costs within this baseline are broken down into labor, fringe, materials, subcontractors, etc. for each functional organization.
- **Cost Reduction Initiatives:** An updated CRP will be submitted prior to the start of the fiscal year that includes both the CRIs that began in Phase I as well as new CRIs which will be implemented in FY15. The FY15 ACB will be in place and provide for measurement of performance of the CRIs. The updated CRP will also include the ACB and the Proposed Baseline for FY15.
- **Change Management Council (CMC):** Will be fully operational and will review appropriate scope; funding and CRI changes. Approved changes to scope, CRIs or budgets will be reflected in both the Mission and Cost baselines.
- **Cost Model:** A single CNS cost model will be in place at the beginning of the fiscal year.
- **Financial Systems:** Two separate financial systems will still exist but data will be consolidated for reporting purposes as well as, performance tracking and verification

purposes of the savings.

13.3.3 Phase III: FY16 Oct 1, 2015- Sep 30, 2016

- **Annual Controlled Baseline (ACB):** Will be established and submitted at the beginning of the FY and will consist of the following:
    - **Mission Baseline**: The Mission Baseline includes costs based on standard rates by Budget and Reporting (B&R) code and by functional organization. The mission scope will be identified through the Prioritized Project List (PPL), along with the resources required to achieve the scope, deliverables, and a risk associated with each PPL is defined.
    - **Cost Baseline**: The Cost Baseline describes the annual costs and headcount needed by CNS Organization to achieve the mission baseline Costs within this baseline are broken down into labor, fringe, materials, subcontractors, etc. for each functional organization.
- **Cost Reduction Initiatives**: CRIs that began in Phase I and II, as well as new CRIs which will be implemented in FY16, will be in place. Performance measurement of these CRIs will occur in the ACB. An updated CRP will be submitted prior to the start of the fiscal year to document the CRIs for this fiscal year and establish a proposed baseline for FY16.
- **Change Management Council:** Will be fully operational and will review appropriate scope; funding and CRI changes. Approved changes to scope, CRIs or budgets will be reflected in both the Mission and Cost baselines.
- **Cost Model:** A single CNS cost model is in place at the beginning of the fiscal year.
- **Financial System:** A single financial system will exist.

13.4 The Change Control Phase Process

CNS will implement a Change Control Phase (CCP) process to capture and approve Baseline Change Proposals (BCPs).

BCPs are needed for changes to the three baselines (Initial, ACB, and Proposed) that result from changes to the ACB and/or CRP. Baseline changes are submitted to the Change Management Council (CMC) that can either endorse them to NNSA for approval or disapprove them. This process shows how CNS accounts for change, identifies whether the change was directed by CNS or NNSA and, if NNSA directed, ensures that appropriate documentation is developed and approvals are obtained. CNS recognizes that such documentation is required to be able to provide the Contracting Officer with sufficient details regarding where changes originated (e.g., who in NNSA directed the change), how the change occurred, how the results were determined, and what actions were taken to revise the baselines. Absent such supporting documentation, baseline changes and potential savings may be disapproved.

The following outlines the CMC's structure and responsibilities relating to the CCP Process...

- **CMC CCP Process Responsibilities**: The CMC provides CNS approval of all BCPs and also maintains the three CNS baselines. All three baselines are included in the annual or mid-year CRP updates. The CMC is responsible for approving BCPs associated with this document. The CMC also is responsible for forwarding approved BCPs to NNSA for final approval. In addition, the CMC is responsible for implementing all BCPs.
- **CMC BCP Structure**: The CNS Chief Executive Officer is the Change Control Chairperson, and the CNS Chief Operating Officer is the Change Control Deputy Chair with authority to act as Chair in Chair's absence. The Change Control Members are the same as the members of the CMC which will include five key members who are senior CNS

managers. In addition, the CNS Transformation Manager is the Change Control Secretary. The CMC members recommend approval or disapproval of baseline changes, but ultimate CNS disposition authority resides with the Change Control Chairperson. In addition, NNSA representatives are invited to all CMC meetings.

14.0 INCORPORATING COST SAVINGS INTO ONGOING OPERATIONS

After we generate savings using our merger, transformation, and continuous improvement initiatives, we face two challenges:

- Ensuring that we sustain the savings, and
- Supporting NNSA in dispositioning those savings.

This section presents our approaches for both challenges. To sustain the savings, CNS must institutionalize the improvements through procedure updates, training or retraining, culture alignment, management attention, and other reinforcement techniques that will stop any erosion of the savings initiative. CNS acknowledges that disposition of the savings is solely NNSA's responsibility and will, of course, support any action chosen. Should NNSA choose to reinvest the savings, CNS will present options for getting the best return on investment. That may be reinvestment within the production enterprise, or it may involve sending the funds to another NSE site. Booz Allen has vast expertise in this area and can offer abundant options. The following sections present more detailed responses to each of these post-savings activities.

14.1 Institutionalization of Cost Savings

Based on their extensive corporate experience, CNS has learned that sustaining transformational change is often as difficult as making it in the first place. As we described previously, it comes down to leadership and discipline. CNS will detail in its CRP policies and procedures the processes it will use to institutionalize the cost savings we gain from our cost savings initiatives; the continuous process improvements realized outside of the CRP initiatives; and, transformation actions taken later in the merger process. CNS is fully incentivized to deliver the savings and guard against unintended consequences. As described in the proposal, CNS will fund a Corrective Measures Program for any corrective measures or rework associated with our cost savings initiatives.

Figure 21 – Change Management Process. The CNS process for reinforcing and sustaining change in the production enterprise is based on hundreds of consolidations.

14.2 Disposition of Cost Savings

Reinvestment of savings affords the opportunity to address aging infrastructure challenges, invest in personnel development and workplace quality of life, finance additional mission work, as well as enable further transformation initiatives. The Savings Reinvestment Process provides a formal framework for guiding contractor-generated savings reinvestment decisions. It establishes a transparent, technically-based business process that effectively identifies and approves those projects and human capital initiatives with significant benefit to the people and missions associated with CNS-operated sites. The process is governed by a set of general guidelines based on underlying contract requirements, program management guidance, fiscal regulations, and annual guidance from senior leadership. The

process is supported by appropriate analysis and requires full stakeholder participation in the development, assessment and selection of projects and initiatives for funding. CNS will provide recommendations on site reinvestment priorities and anticipates NNSA review and/or approval of projects based on magnitude of investment and potential impact to the wider Nuclear Security Enterprise.

14.3 Continuous Full and Open Transparency

CNS recognizes that cost performance on this contract may be more highly scrutinized than for any other NNSA M&O. Cost savings and efficiency gains were the motivation for merging the two contracts. The proposed cost savings played a large role in the selection of CNS and many are tracking performance to ensure goals are achieved. To satisfy this level of scrutiny, we respond with complete and total transparency as to all cost and schedule data—process rates, labor and material costs, staffing levels, overhead pools, and any other data needed to fully understand the savings we have proposed and the level to which we are achieving them.

To deliver this information, we are implementing a cost effective, web-based Consolidated Information System (CIS) that will leverage technologies that make it compatible with the NNSA Network Vision. CIS is a straightforward SharePoint-based portal to the information maintained by the consolidated data warehouse we will put in place in order to integrate the Pantex and Y-12 ERP systems. CIS leverages Lockheed Martin's experience and best practices in deploying these types of transparent management portals for many other US Government departments including Health and Human Services and the Department of Defense. An underlying key tenant of our development approach is to migrate over time to a consolidated, integrated enterprise IT management model. This approach will be detailed more specifically in the Architectural Roadmap deliverable, to be provided December 2014. However, during the transition period, a common operating domain will be established to provide access to shared calendars, contacts, email, data shares and applications using a trusted relationship between the two networks. This serves as a first step in establishing the necessary architectural foundation for development of an integrated CIS.

After transition is complete, working with business and technical stakeholders, the team will continue further development of user, business, data and technical requirements to ensure continuous full and open transparency is maintained. Requirements related to key CIS attributes such as permissions, reports, dashboards, data access, system usability and system performance will serve to drive system design and requirements validation testing. The CNS team understands the importance of developing an intuitive, flexible and easy to use system and the criticality of gaining end user input to develop an optimal system used to measure the performance of the new organization.

The CNS team will begin the journey to a consolidated enterprise information system environment leveraging NNSAs current technology investments in SharePoint, Data Warehouse, and Enterprise Resource Planning (ERP) platforms at Pantex and Y-12. A data warehouse will serve as the point of data consolidation to be utilized by the Consolidated Information System (CIS) SharePoint based Portal to provide CNS, NPO, and NNSA leadership access to consolidated data from the existing systems. By using this approach we begin the process of consolidated reporting, standardization, and cross-site alignment of core business processes without impacting production operations, thereby minimizing risk to core mission operations. The consolidation of this data brings full transparency with improved visibility to NNSA, NPO, and CNS, reducing the need to comb through multiple reports from

multiple systems. The upward reporting capabilities bring a quick implementation of a cost-effective, intuitive web-based interface with minimal training time. In addition to the consolidation of data, the team will look for opportunities to retire existing applications whose functionality will be replaced by or integrated into the CIS. This approach presents significant opportunity for additional cost reduction. The team has begun working with the CNS functional organizations identifying consolidated reporting capabilities to be available prior to July 1.

In parallel to the infrastructure consolidation activities, the team will continue to review and identify the specifics related to role based permissions, standardized reports, specialized dashboards and real-time data access. This approach ensures that access to information is controlled yet securely accessible. The benefit of this approach is that the CIS can grow in phases, providing NNSA, NPO and CNS access to performance data and visibility into critical operating and contractual management elements. The result is a simple, easy-to-install, easy-to-use CIS that will provide NNSA and the NSE community with the data needed to validate the cost savings we will achieve. A phased system implementation approach, proven valuable in past instantiations, requires managing expectations and delivering focused aligned features that provide the desired outcomes. Proposed phases of the CNS implementation are detailed below:

<u>CIS Phase 1</u>:
CIS Initial Operating Capability (IOC) will encompass an intersite shared SharePoint environment that will be accessible from both Pantex and Y12. This SharePoint environment will be structured to support various functional and governance information publishing requirements from each functional area. The initial content within this structural framework will be limited to descriptions of the functional areas and any information that the functional areas wish to publish within the environment.

<u>CIS Phase 2</u>:
Data Definition: After the successful deployment of the CIS IOC, the Information Solution & Services Team will work closely with the functional organizations to establish a comprehensive governance framework and define their key performance indicators (KPIs), SLAs and metrics each need to manage the Mission effectively. Once these definitions are identified, the key information will be entered into the system to provide the comprehensive governance dashboards until Phase 3 is completed.

<u>CIS Phase 3</u>:
Integration and Automation: The collection and display of the information defined and manually updated in Phase 2 will be automated through the integration of key system feeds to allow the information to be processed, correlated and displayed automatically. These feeds will include real time, where applicable, data feeds from existing toolsets across the enterprise to minimize the human interaction required for this data collection and reporting capability.

These information feeds from ‘element manager systems’ across the enterprise will be aggregated and orchestrated via an Enterprise Data Warehouse that will gather all of these data feeds for pre-processing and correlation before populating the management dashboards within the presentation layer of CIS. (The architectural model for this environment is outlined in Figure 22.)

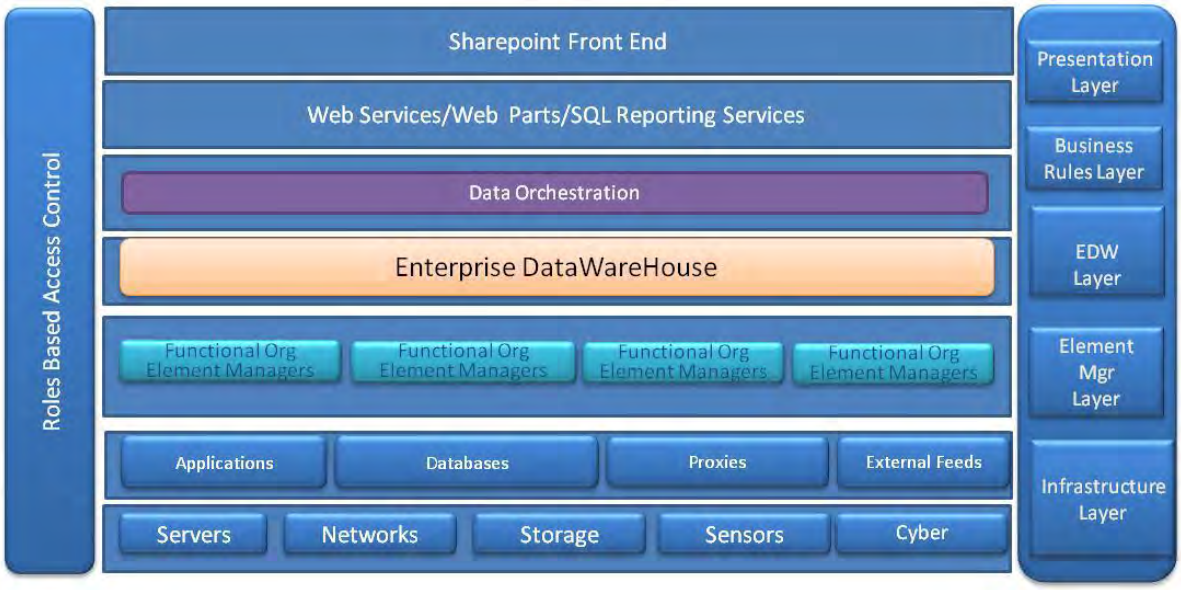

Figure 22 - Architectural Model for the Data Warehouse Environment

CIS Phase 4:
CIS Final Operating Capability (FOC) will encompass the final integrated system feeds to provide the final operating state of the CIS. The CIS will then move into operations and maintenance (O&M) lifecycle support with new features and integrations managed via the standard Configuration Management (CM) and Software Quality Assurance (SQA) processes.

Throughout all phases of deployment, the CIS system will control access to content via the Standard Active Directory Group Policy Definitions within SharePoint. Access to the Public Access Areas of CIS (Storefront, Functional Area Descriptions, Service Desk Ticket Status, etc.) will be available to all authenticated users. Access to business sensitive information such as HR, Finance, etc. will be limited to those groups and accounts with “Need-to-Know” access.

Pursuant to the deployment of Phase 4 FOC, the CIS is envisioned as becoming the ‘one-stop-shop’ for performance information related to the Operations and Management of the CNS Environment.

Appendix 1: MTP REQUIREMENTS COMPLIANCE MATRIX

MTP Requirement	Contract Section	Contract Sub-section	Contract Page #	MTP Page #	MTP Section
At a minimum, the Merger Transformation Plan shall describe how the Contractor will:					
Manage merger of operations without negatively impacting mission	J	Appendix A-3.2	5	5-10	2.0 CNS approach to Merger & Transformation
Ensure critical skills necessary to maintain capabilities	J	Appendix A-3.2	5	5-10	2.0 CNS approach to Merger & Transformation
Identify and streamline redundant technical and business operations across the sites under this Contract	J	Appendix A-3.2	5	26-30	9.0 CNS approach to savings, 0 Methodology
Incorporate governance (Section J, Appendix A, Chapter I, 4.4)	J	Appendix A-3.2	5	11-16	4.0 Governance of the Merger
Maintain relationships and regulatory interfaces, and assume responsibility for permits with local, State and Federal entities, other DOE offices, and stakeholders.	J	Appendix A-3.2	5	5-10	2.0 CNS approach to Merger & Transformation
Other Requirements:					
The MTP shall also include Performance Fee Incentives, with associated objectives, measures, and targets to be considered for inclusion in the Contract's Performance Evaluation Plan (PEP), which may be multi-year, and be used as consideration for additional Contract term.	F	5 (a)	17	26, 31-33	8.0 Performance Evaluation Plan, 11.0 CNS Proposal and Incentive Fee
The MTP described in Section F, F-7(e), includes the Timeline of Projected Cost Savings	I	19 (a)	31	33	Figure 19 – Projected Cost Savings

[i] Tailored from Project Management Institute, *Guide to The Project Management Body of Knowledge (PMBOK®) – Fifth Edition*. (Newtown Square, PA: Project Management Institute, Inc., 2013), 316-317

[ii] Project Management Institute, *Practice Standard for Project Risk Management*. (Newtown Square, PA: Project Management Institute, Inc., 2009), 17

[iii] *Practice Standard for Project Risk Management*, p. 110

[iv] Bechtel 10P-M60-0004 REV 001 PERM Procedure

[v] Project Management Institute, *The Standard for Portfolio Management – Third Edition*. (Newtown Square, PA: Project Management Institute, Inc., 2013), 208

[vi] *The Standard for Portfolio Management – Third Edition*. p. 120

[vii] *The Standard for Portfolio Management – Third Edition*. p. 129
[viii] *The Standard for Portfolio Management – Third Edition*. p. 122
[ix] Project Management Institute, *Standard for Program Management – Third Edition*. (Newtown Square, PA: Project Management Institute, Inc., 2012), *p. 95*