

H. CONTRACTOR MULTIYEAR STRATEGY FOR PERFORMANCE IMPROVEMENT

The LLNS team has an aggressive program to support the NNSA Complex 2030 vision. Our strategy focuses the LLNS parent organizations' innovative capabilities to achieve:

- A model nuclear weapons design laboratory with a reduction in onsite activities that can be accomplished more efficiently elsewhere
- Seamless application of LLNS parent organizations' capabilities to help LLNL and other sites meet their milestones and solve problems
- Expanded support for the exceptional science and technology critical to the NNSA mission
- Integration of parent organizations' best practices, systems, and tools to achieve dramatically reduced costs

Our Contractor Assurance System will be a valuable tool to achieve continuous improvement. Our formal continuous improvement system will be managed by our Contractor Assurance Officer.

In response to Sections H-3 and L-3 of the RFP, we discuss planned efforts and expected accomplishments in the areas of laboratory performance, parent organization efforts and contributions, enhanced integration of the NWC, and contribution to the overall NWC performance improvements in Figures H-11 through H-17 beginning in Section H.2. In developing these commitments, we applied lessons learned from LANL and from other NNSA and DOE sites our parent organizations manage.

H.1 STRATEGY AND APPROACH FOR CONTINUOUS PERFORMANCE IMPROVEMENTS

Our strategy to improve performance at the Laboratory (Figure H-1) is built on several interrelated initiatives: achieving Complex 2030 integration, dramatically reducing cost while improving business and operational per-

The LLNS plan for continuous improvement and enhanced laboratory performance begins with several key commitments:

- Implement breakthrough approaches to R&D programs, including:
 - Consolidating predictive codes and testing facilities
 - Resolving three grand challenges of weapons physics
 - Completing NIF, achieving ignition, and making it the premier user facility
 - Partnering with NNSA for securing the international nuclear fuel cycle
- Double WFO funding by the end of the base contract
- Reduce the cost of support services by 20% within 3 years
- Manage all science research programs/projects with EVMS by the end of FY2010
- Realign our workforce and improve our direct-to-indirect ratio by 20%
- Establish CAS to promote and achieve continuous improvement

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Figure H-1. Strategy for Improved Performance. Improvement initiatives are interrelated, covering the most critical aspects of laboratory operations and resulting in enhanced performance and outstanding value.

formance, providing exceptional S&T, and expanding WFO. Through these initiatives, we will achieve a Laboratory of outstanding value to the NWC.

We are committed to optimizing LLNL's base operations to sustain world-class mission delivery while expanding the Laboratory's sponsor base to support the NNSA mission. Costs will be dramatically reduced by improving work processes, eliminating duplicate efforts and shadow systems, and by providing systems support to improve performance, particularly in nuclear facility operations and emergency management.

We will continually realign staffing levels over the life of the contract to reflect efficiency gains, funding profiles, WFO growth, and NWC integration. Figure H-2 shows workforce realignment and direct-to-indirect ratio optimization. To support realignment initiatives in R&D, we will use an S&T roadmap to align mission science and technology needs, critical skills, facilities, and workforce.

We will update the S&T roadmap annually with NNSA and other sponsor participation.

H.1.1 APPROACH TO CONTINUOUS IMPROVEMENT

Our strategy for the Laboratory is to make continuous improvement a way of life, ensuring a laboratory that is characterized by exceptional science and outstanding value. We will build feedback loops into virtually every aspect of laboratory operations and have integrated our organization horizontally and vertically to share lessons learned and innovation. Our Contractor Assurance System (CAS) will establish an integrated institutional system that will give Laboratory management real-time insight into performance and facilitate executive decision-making and continuous improvement.

The Laboratory Director is ultimately responsible for this process; he has designated the Deputy Director as the champion for continuous improvement and the CAS. All performance management and improvement issues will be monitored, tracked, and rolled up for the Laboratory Director and senior leadership to review monthly.

As illustrated in Figure H-3, the process for continuous improvement is twofold: performance management and performance improvement. The process involves defining scope and priorities for management, establishing metrics, and then using proven methods to study, test, and implement changes that, in turn, improve performance.

H.1.2 PERFORMANCE MANAGEMENT SUPPORT

The parent organizations use a number of tools to manage performance at the five NNSA sites and the 10 DOE national laboratories they oversee. We will identify areas needing improvements using assessments of performance, benchmarking, peer review, customer feedback, and workforce surveys. Figure H-4 defines some of the key tools that we will use at LLNL. The Labora-

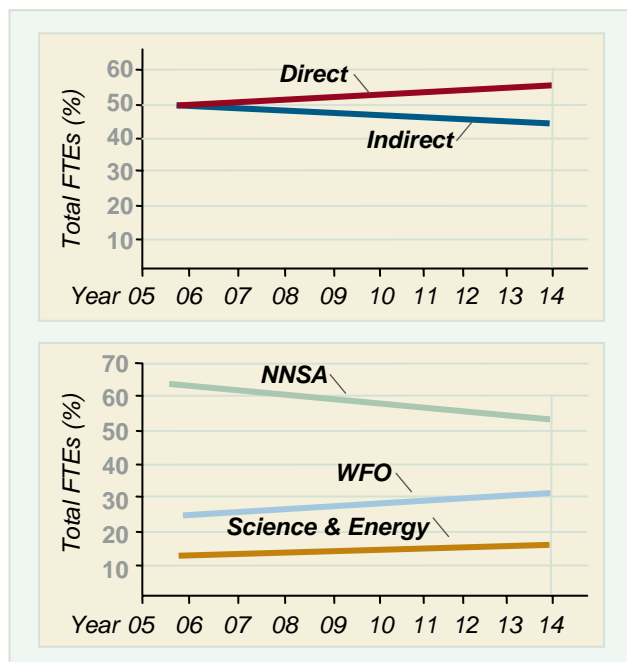
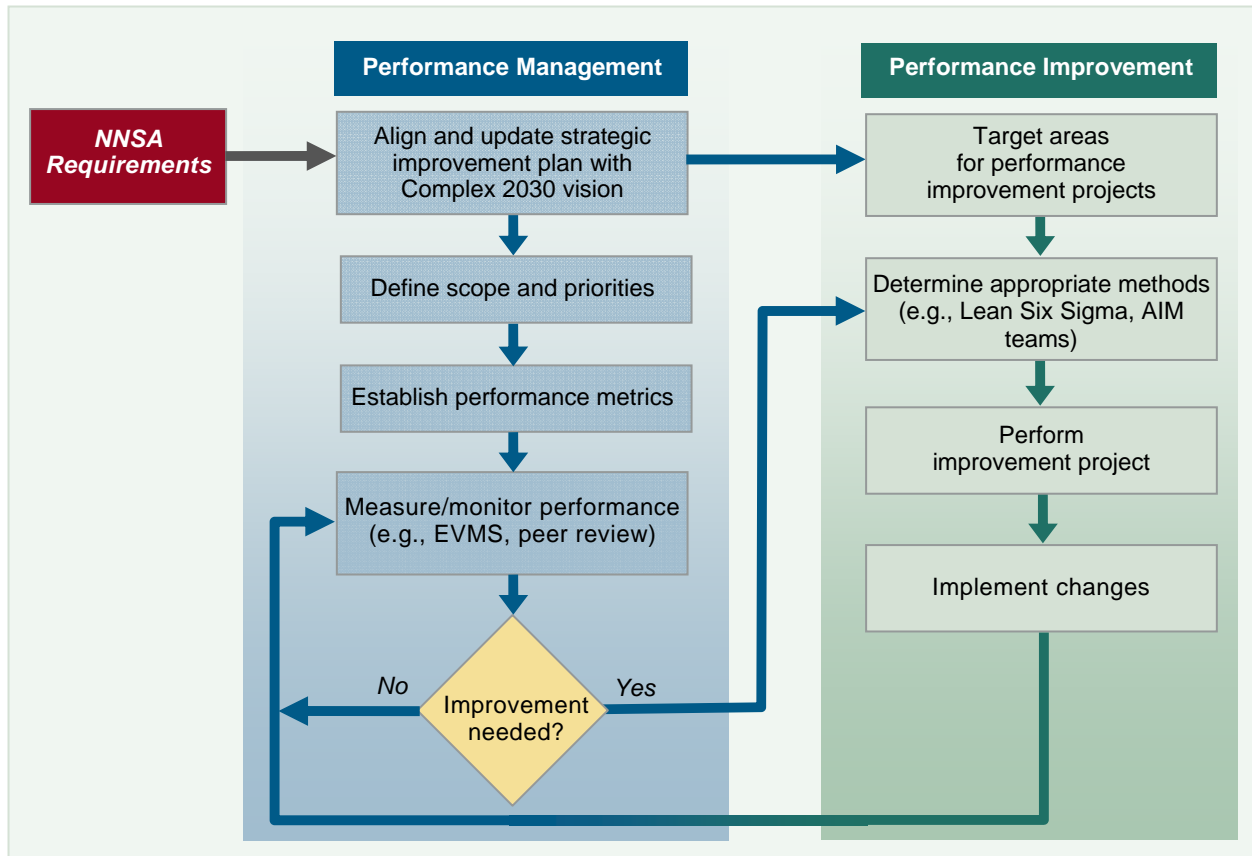


Figure H-2. Workforce Realignment. By the end of FY2014, we will improve our direct-to-indirect ratio by 20% and reduce NNSA staffing by 25% as a percentage of the overall workforce by growing the relevant WFO and Science and Energy programs to retain critical skills.



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Figure H-3. Continuous Improvement Approach. Established processes for continuous improvement will result in meeting our commitments to the Laboratory and the NWC.

tory Director will prioritize commitments and budgets for improvements with respect to mission importance and potential benefits, including cost efficiencies. These decisions will become commitments defined in the annual Multi-Year Strategy for Performance Improvement.

Information System Support for Requirements and Performance

Currently the LLNL workforce is required to go to multiple sources of information to understand work requirements and expectations for performance. We will implement an information system similar to Battelle’s Standards Based Management System (SBMS) to define roles and responsibilities, and to identify clear expectations concerning how to execute work.

In the first year of the contract, the Contractor Assurance Office will lead initiation of the information system. Program managers and functional managers will develop and maintain information for their areas of responsibility, and will assess performance against established requirements.

In addition, working with other sites, we will evaluate and select information management software for displaying metrics and performance assessment results. Working with

- Standards Based Management System** – A Web-based information system documenting work requirements, procedures, and roles and responsibilities
- Project Controls/EVMS** – A cost and schedule system that monitors budget and progress against a baseline
- BSIP (Business Systems Improvement Project)** – A project to update and integrate finance, procurement, and HR systems and incorporate project management tools
- Peer Review** – Outside experts who assess and improve the quality of technical and programmatic work

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Figure H-4. Performance Management Support Systems. LLNS has powerful management systems support tools to enhance Laboratory performance.

NNSA, we will identify a set of metrics that will facilitate standardization of performance measurement across the Complex.

Project Controls/EVMS

We will conduct major research and development programs using EVMS. Our goal over the contract term is to reduce level-of-effort work to less than 25% of the total budget by managing all programmatic elements using a common work breakdown structure (WBS) and common project management tools. Currently, LLNL uses a DOE-certified EVMS to track work progress on construction projects, IT projects, and selected programmatic work. Integration of the parent organizations' capabilities into IT system upgrades and the application of EVMS to science research work will enable LLNS to manage all programmatic elements with EVMS by the end of FY2010.

With LANS, we will establish a common approach to a WBS and develop a template for a graded approach in applying EVMS. The WBS and template will be tailored to the specific needs of LLNL and will be based on costs, complexity, type, and importance of the work. We will incorporate proven project management systems and tools into the program and will enlist project controls specialists from our parent organizations, who will help implement and train executive managers, project and program managers, and key scientists in how to use EVMS in an R&D environment. Also, training the trainers helps us implement common management processes.

Figure H-5 illustrates our FY2008–FY2010 plan of action for conducting major R&D using EVMS. By the end of FY2008, we will manage the following using EVMS with a graded approach: Superblock, Significant Finding Investigation (SFI) projects, initial Direct Stockpile Work (DSW) projects, global security projects, NIF, National Ignition Campaign (NIC), LDRD, IT projects, and environmental management (EM) projects.

Peer Review and Scientific Skepticism

Our approach protects and enhances the factors that have led to LLNL's outstanding S&T, primarily a very healthy scientific skepticism and a strong system of peer review. Our approach includes:

- Accessing the UC system, the largest research university in the world, and Texas

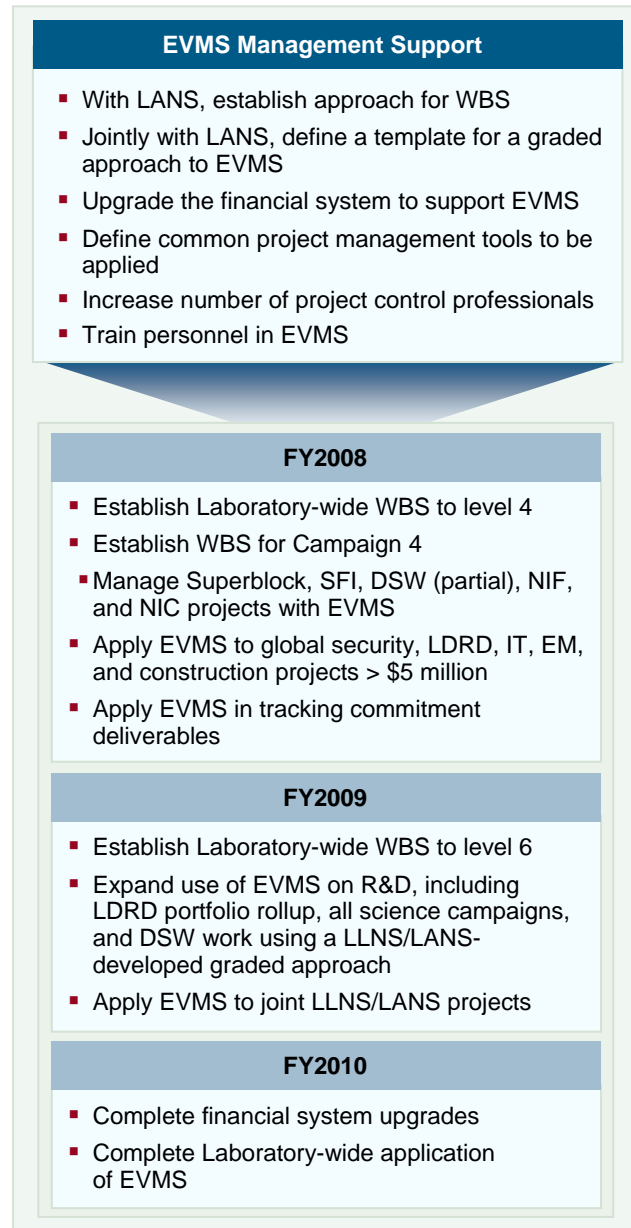


Figure H-5. Conducting Major R&D Using EVMS. Our goal is to enable the Laboratory to conduct all research with an EVMS-graded approach by the end of FY2010. 06_0069_271a

A&M, one of the top R&D universities and a national leader in nuclear engineering and research

- Creating joint LLNL/LANL scientific policies and external reviews procedures to ensure intellectual freedom and scientific skepticism
- Establishing the S&T Assessment Office that reports to the PAD for S&T and that will be the control point of contact for LLNL's scientific assessment program
- Use UC and Battelle as resources for high-quality scientific expertise with a special emphasis on knowledge capture from retiring scientists and engineers with critical skills
- Jointly with LANS, managing directorate reviews and their memberships centrally to achieve a better, more efficient peer-to-peer comparison
- Rotating staggered memberships on review committees that will lead to a fresh look at S&T and inform more external scientists about NNSA S&T enterprise
- Enhancing scientific competition and debate that will identify potential issues early

Lean Six Sigma – A systematic approach to improving business priorities by mapping processes, eliminating activities that do not add value, and changing procedures to improve performance. “Lean” focuses on cycle time, and “Six Sigma” focuses on process improvement

Benchmarking – Identification of best industrial practices by determining who is the best at a specific activity and studying their approach

Quantification of Margins and Uncertainties (QMU) – A science-based tool for Stockpile Stewardship that is used to prioritize work by evaluating risk

Performance-Based Leadership (PBL) – A process that focuses on improving business results by motivating the workforce to change its behavior

AIM Teams – Uses the reachback capabilities of our parent organizations to form teams of experts to assess, improve, and/or modernize specific operations at the Laboratory

Figure H-6. Performance Improvement Tools. Proven tools will be used to identify, assess, and manage opportunities for continuous improvement. ^{06 0069_188}

H.1.3 PERFORMANCE IMPROVEMENT MANAGEMENT METHODS

Once sufficient data have been collected on the key performance metrics, we can assess performance. Figure H-6 identifies the key tools that LLNS will use to improve performance at the Laboratory.

Selecting Appropriate Tools for Performance Improvement

Where performance is less than desired, we will initiate an appropriate process improvement project using improvement tools that are selected depending on the nature of the problem and the desired outcome. Figure H-7 highlights the process to determine appropriate tools to apply in various situations. For example:

- If the solution is readily apparent, no improvement project is necessary; however, we may need to develop a plan to address behavioral motivations. Bechtel's performance-based leadership (PBL) methodology offers a structured way to examine antecedents and consequences that drive behavior.
- If a solution is not readily apparent, we will conduct an assessment to determine whether or not the problem is an isolated incident or a recurring problem. This assessment could be accomplished by analyzing trends from lessons learned, self-assessment, or through functional assessment programs.
- Isolated problems can be solved by assembling internal or external subject matter experts (SMEs) or AIM teams to examine the root causes and develop improvement plans.
- Recurring problems require Lean Six Sigma tools. If the issue is a lack of a process, Six Sigma will be used to establish a process and validate its performance. If the process exists

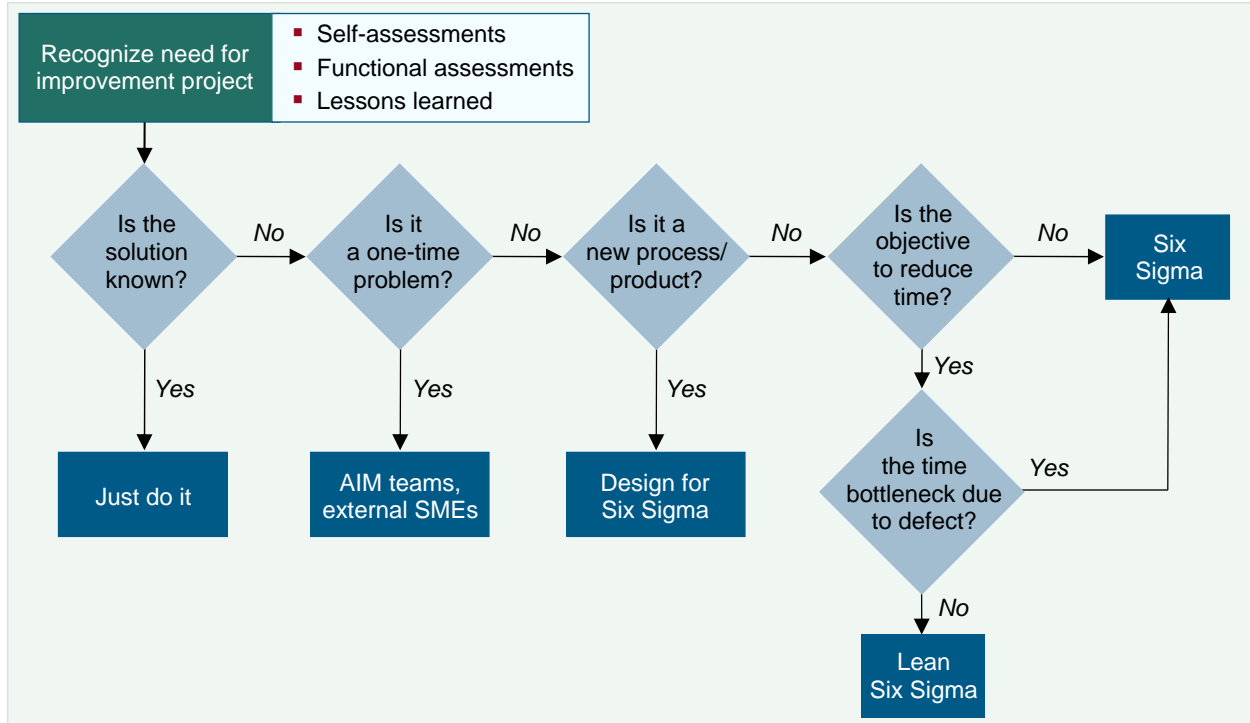


Figure H-7. Using Continuous Improvement Tools. We deploy proven tools for performance improvement appropriate to specific circumstances. 06_0069_272b

but requires cycle-time improvements, Lean tools will be applied. If the problem requires a reduction in defects, then traditional Six Sigma tools will be used.

Lean Six Sigma

Our parent organizations use various performance improvement methodologies to evaluate, study, and implement positive change at the sites we manage. Key among them is Lean Six Sigma. Lean Six Sigma focuses on workflow processes and will help us achieve our management goals for performance improvements and efficiencies across the Laboratory. Using Lean Six Sigma methods, the parent organizations have achieved remarkable cost savings and improved workflow processes. Figure H-8 highlights that in the past 5 years, the parent organizations have implemented hundreds of process improvement projects, leading to a savings of more than \$1 billion in process improvements and efficiencies that have directly benefited NNSA and DOE missions.

With Bechtel’s help, we will implement an aggressive systematic approach for applying best practices, Lean Six Sigma, and PBL. Our initial focus will be on operations and business. During the first year, the senior management team will undergo training in performance improvement principles and will then train other LLNL personnel. We estimate that application of best practices and Lean Six Sigma will streamline the Laboratory’s support services by 20% by the end of FY2010.

H.1.4 THE ROLE OF LABORATORY MANAGEMENT

Our approach is based on creating an environment in which everyone is responsible for continuous improvement and where accountability for performance is at all levels. The achievability of this approach is based on sound improvement processes and methods and on lessons learned

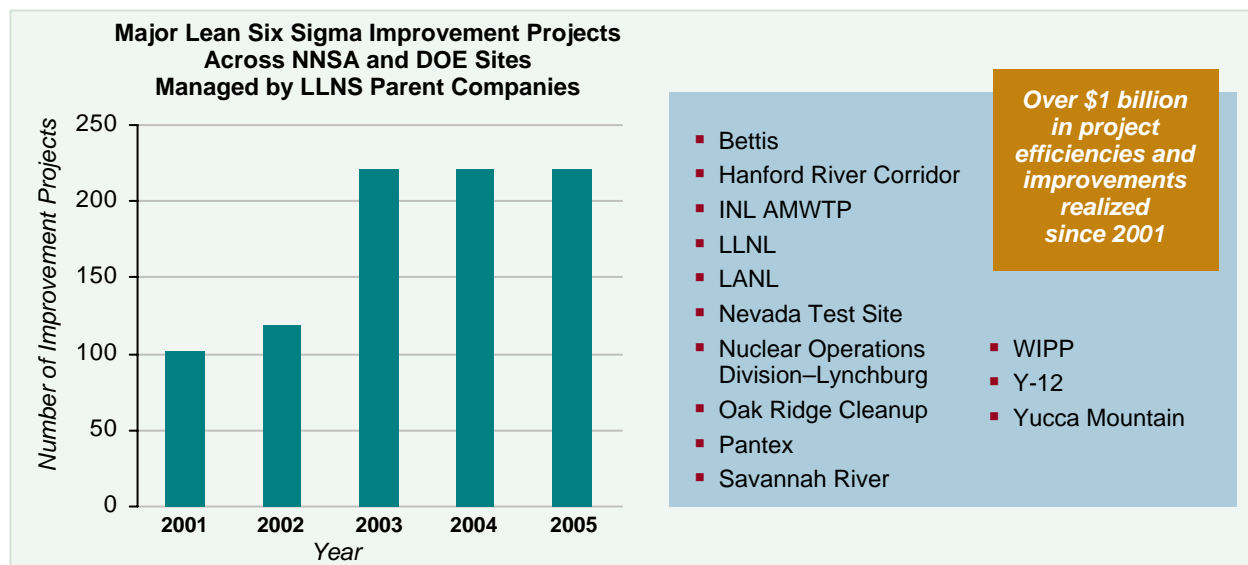


Figure H-8. Lean Six Sigma Success at NNSA and DOE Sites. In the past 5 years, LLNS parent organizations have performed hundreds of improvement projects, leading to more than \$1 billion in project efficiencies and process improvements.

from similar programs throughout the Complex, including LANL’s new continuous improvement and contractor assurance program.

Accountability for laboratory performance begins with the Laboratory Director, who delegates responsibility and authority to his leadership team and holds them accountable for both their individual and their team’s performance. Line management defines assurance plans for their organizations, applies assurance methods based on the risk levels of their work activities, and is responsible for performance assurance. These self-assessments and assurance activities provide the foundation for our CAS.

The CAS establishes an integrated institutional management system for continuous improvement and provides the quantitative basis for strategic and management decisions about managing risk, prioritizing budget, and drawing conclusions about performance. The Deputy Director is designated as the champion for continuous improvement and the CAS. A Contractor Assurance Office will be established in the Director’s Office to provide the staff support to develop and improve the CAS.

Figure H-9 illustrates how the Contractor Assurance Office responsibilities support CAS and how its activities will be focused on the continuous improvement process. The Contractor Assurance Office provides guidance and support to management on risk methodologies, assurance processes, and metrics, and

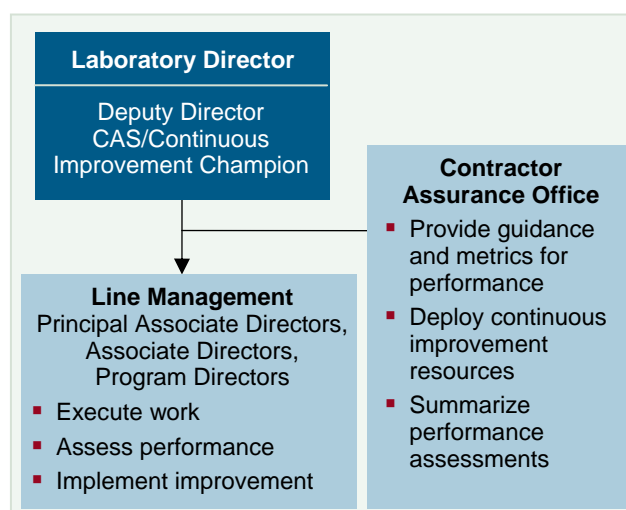


Figure H-9. Line Management Responsibilities for Continuous Improvement and Performance Assurance. Defined responsibilities enable integration of requirements, trade-offs for resources, and optimized continuous improvements.

will roll up information from performance assessments to keep the Laboratory Director and all levels of management, LLNS Board, and NNSA informed. When the Laboratory Director asks “How am I doing?” the Contractor Assurance Office serves as the key point of contact for performance information.

The Contractor Assurance Office will deploy appropriate tools and continuous improvement processes and will coordinate expert resources from parent organization reachback. The Contractor Assurance Office will also establish an information system for defining requirements and maintaining information on metrics, performance, and status of corrective action commitments. This office will also manage the lessons learned program.

H.1.5 ROLE OF PARENT ORGANIZATIONS

The role of the parent organizations is key to the success of enhancing performance at the Laboratory and throughout the NWC. Through the LLNS Board of Governors and our parent organizations, we will provide:

- Reachback to parent resources and expertise
- Access to corporate best practices, systems, and tools
- Oversight of LLNL performance

The Board of Governors will monitor CAS implementation. The Board will provide the necessary resources in support of LLNS commitments for performance improvement. These resources include AIM teams and functional assessment teams for a wide range of technical and management areas.

AIM teams capitalize on the reachback capabilities of the parent organizations to assess, improve, and/or modernize specific operations at the Laboratory. The teams are composed of external subject matter experts who are convened to solve specific problems. AIM teams are approved by the Laboratory Director. Parent organizations have committed to provide eight AIM teams for the first year at no cost to NNSA.

Functional assessment teams are budgeted and defined in the parent oversight plan and include experts from within the parent organizations, from other DOE and NNSA sites they manage, or from third-party expert organizations. Their objectives are to assess implementation of best practices, mentor lead functional personnel, and conduct performance oversight assessments. During the first year, designated teams will undertake eight assessments in mission areas and 18 in business and operations.

Figure H-10 illustrates how AIM teams and the functional assessment teams will work in tandem during FY2008.

Support Area	AIM Teams FY2008	Functional Assessment Teams FY2008
ES&H	ES&H management systems – 1st Qtr Radiological Safety – 2nd Qtr	Progress on Phase I of ISM certification – 3rd Qtr
Nuclear Operations	Develop Conduct of Operations Implementation Plan and an enhanced nuclear operations training program – 1st Qtr Disposition of nuclear materials – 1st Qtr	Approach on nuclear operations – 4th Qtr
Emergency Management	Gap analysis for certification – 2nd Qtr	Certification progress review– 4th Qtr
HR	Recruitment/retention process compared to best practices – 2nd Qtr	Succession planning processes – 3rd Qtr
Training	Training programs and management structure – 2nd Qtr	Quality of training – 4th Qtr
Facilities & Infrastructure		Process for space assignments or cost allocations – 1st Qtr
Security		ISSM/cybersecurity review – 1st Qtr
Financial		Cost model to drive efficiencies – 3rd Qtr Process review for controlling budget and resource levels – 2nd Qtr
Information Systems & Technology		Assess progress on enterprise model – 2nd Qtr
CAS	Approach to CAS – 1st Qtr	Progress on CAS – 4th Qtr
Environment		ER organization – 2nd Qtr
Legal Affairs		Risk based process for priorities of legal staff – 2nd Qtr
Quality Assurance		QA program for weapons – 3rd Qtr
Technology Transfer		Technology transfer and intellectual property processes – 1st Qtr
LDRD		Process for LDRD portfolio management – 4th Qtr
Waste Storage		Management approach for material management and waste storage against site treatment plan – 3rd Qtr
Project Management		Progress on EVMS implementation – 4th Qtr
Note: Two functional assessments will also be completed for each of the three mission areas and S&T.		

Figure H-10. FY2008 Plan for Operations. AIM teams are coordinated with functional assessment teams to solve problems, offer solutions, and assess results.

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H.2 PLANNED EFFORTS AND EXPECTED ACCOMPLISHMENTS, FY2008 AND FY2009

In accordance with Sections H-3 and L-3(h) of the Request for Proposal, our multiyear strategy for continuous performance improvement includes specific planned efforts and expected accomplishments for FY2008 and FY2009 in the areas of science and technology, laboratory operations, and business operations (Volume II, Criterion 3, 4, and 5 respectively). Tables in each of the following four sections highlight specific management objectives, expected accomplishments for continuous improvement, and the actions we commit to undertake to achieve these objectives.

- H.2.1 Laboratory Performance
- H.2.2 Parent Organization Efforts and Contributions
- H.2.3 Enhancing Integration Between LLNL, LANL, and the Rest of the NWC
- H.2.4 Contribution to Overall NWC Performance Improvements

H.2.1 LABORATORY PERFORMANCE

Our planned efforts and expected accomplishments in laboratory performance are based on our goal to provide outstanding value to the NNSA and the national security mission. Our strategy is built on achieving Complex 2030 integration, delivering strong mission performance and exceptional S&T, dramatically reducing costs while improving business and operational performance, and initiating an aggressive program for WFO growth to support the NNSA mission. In support of these strategies, we will address ongoing workforce realignment that will meet our cost reduction goals while ensuring a workforce that is the right size and has the necessary skills to perform the mission.

FY2008 and FY2009 commitments for LLNL performance improvements are organized by our strategic initiatives in the following tables:

Figure H-11 Enhancing Delivery on Mission and Providing Exceptional S&T

Figure H-12 Expanding Work for Others

Figure H-13 Improving Operations and Efficiency

Figure H-14 Addressing Workforce Realignment

Efforts and contributions to laboratory performance by our parent organizations and commitments that depend on coordination and integration within the NWC are color coded in the tables. Some parent organization efforts are duplicated in Section H.2.2, Parent Organization Efforts and Contribution, and some commitments involving NWC coordination and integration for enhanced performance are duplicated in Sections H.2.3 and H.2.4.

FIGURE H-11. ENHANCING DELIVERY ON MISSION AND PROVIDING EXCEPTIONAL S&T

Key: = Efforts and contributions by our parent organizations = Coordination within the NWC

Mission/S&T Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
Laboratory Management				
Organization Structure an organization to support the accomplishment of our management objectives and goals	Approve R2A2s for every supervisory position within 6 months of contract take-over		Basis for employee annual performance evaluations	A.1
Contractor Assurance System (CAS) Establish a management system that assures we are meeting our commitments and are continuously improving our performance Establish CAS as the model for the complex	Establish a CAS office that reports to the Director to: <ul style="list-style-type: none"> ▪ Provide guidance ▪ Deploy continuous improvement resources ▪ Roll up performance information monthly 		Formal system that enables management to gain real-time insight into performance and facilitates executive decision-making and continuous improvement Holds all levels of Laboratory accountable	A.1 A.2 C.1.a C thru E
Functional Assessments Assessments conducted by the Board will provide input to CAS	Conduct 26 assessments spanning all primary functional and programmatic areas	Assessments will be defined based on FY2008 internal assessments	Provide critical insights and advice to LLNS management to drive performance excellence	A.2
Conducting Major R&D Programs				
S&T Efforts Maximize return on investment Provide NNSA the opportunity to save \$100 million through FY2010, \$500 million through the base contract, and \$2.5 billion before FY2020			Provide outstanding value to NNSA and enable achievement of Complex 2030 vision	C.1.a
S&T Roadmap Partner with our customers to better address tactical and strategic planning	Enhance Laboratory-wide roadmap process that supports Complex 2030 vision and other national and global security needs Roll up roadmap sub-elements: <ul style="list-style-type: none"> ▪ LDRD thrust areas 	Update S&T Laboratory-wide roadmap	Strategic focus on LDRD investments, approach to partnerships and S&T sponsors, and defined needs for facilities and workforce	C.1.a

Mission/S&T Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
	<ul style="list-style-type: none"> ▪ National/global security roadmap with LANS ▪ LDRD and nuclear non-proliferation roadmap with LANS 		WFO aligned with NNSA mission	C.1.b.8 C.1.b.2
<p>Implement Sitewide EVMS</p> <p>Achieve a consistent, Laboratory-wide EVMS system to enable performance tracking of all activities by the end of FY2010</p> <p>Reduce level-of-effort work to <25% of total budget within the contract term</p> <p>Complete financial system upgrades by FY2010</p>	<p>WBS</p> <p>Establish Laboratory-wide WBS to level 4</p> <p>Establish WBS for Campaign 4 as a model for science research</p> <p>EVMS Support</p> <p>Initiate upgrade financial system to support Laboratory-wide EVMS</p> <p>Assign Bechtel project control personnel to augment current staff and tools to support work</p> <p>Train program and project managers on EVMS</p> <p>Jointly with LANL, define a template for graded approach to EVMS</p> <p>Apply EVMS</p> <ul style="list-style-type: none"> ▪ Superblock, SFIs, NIF, NIC,DSW program (partial) ▪ Global Security and LDRD, IT, EM and construction projects >\$5M ▪ Track commitment deliverables 	<p>WBS</p> <p>Establish Laboratory-wide WBS to level 6</p> <p>Continue upgrade efforts on the financial system</p> <p>Apply EVMS</p> <p>Expand use of EVMS on R&D, including LDRD portfolio rollup and all science campaigns and DSW program elements</p> <p>Apply EVMS to joint LLNS/LANS projects</p>	<p>Systematic method of tracking performance and identifying issues for management action</p> <p>Consistent EVMS between LLNL and LANL. Applied to joint projects</p>	C.1.a E.2 E.4
<p>Scientific Skepticism and Peer Review</p> <p>Establish central management of peer review process</p>	<p>Establish S&T Assessment Office (STAO), reporting to S&T PAD, to manage over-all scientific assessments</p> <p>Expand Directorate Review Committee (DRC) review to LDRD projects</p> <p>Share DRC committee members with LANL</p> <p>Board of Governors S&T committees will establish metrics for portfolio assessments of both LLNL and LANL</p>	<p>Continue annual peer reviews and STAO assessments using new structure</p>	<p>Improved, more efficient peer-to-peer review of S&T</p> <p>25% cost savings for the peer review process achieved through central management and sharing of DRC members</p>	C.1.a

Mission/S&T Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
<p>Continuous Improvement</p> <p>Institute a lean Six Sigma program that reduces support-services costs by 20% within 3 years</p> <p>Establish AIM teams to help LLNL analyze critical profiling and provide solutions to improve performance</p>	<p>Assign a Master Black Belt and full-time trainer from Bechtel</p> <p>Select six employees to be trained as Black Belts</p> <p>Train program and project managers</p> <p>Each operations AD to establish targets for performance and identify appropriate PIPs or assign AIM teams as designated in the Parent Oversight Plan</p> <p>Conduct 8 AIM team efforts for selected areas</p>	<p>Continue ongoing PIP and AIM team assignments</p>	<p>Dramatic cost reductions due to improved work processes</p> <p>Performance improved and costs cut</p>	<p>C.1.a E.2 C.1.a A.2</p>
<p>University Relations</p> <p>Improve strategic university relations</p> <p>Increase joint facility appointments by a factor of two (to 220) by FY2010</p> <p>Increase the number of post-docs from 65 to 100 by end of FY2010</p> <p>Increase the number of students at the Laboratory by 50% (200 to 300 students) by end of FY2010</p>	<p>STAO will assess ROI on investments with university institutes and centers</p> <p>Texas A&M University System will create and provide joint graduate programs in international security/policy</p> <p>Provide 300 graduate fellowships/summer employment to students from UC, Texas A&M, and other universities</p> <p>Transition from current UC Davis facility onsite to an engineering graduate teaching campus with emphasis on cyber security and System Engineering</p>	<p>Continue ROI analysis on investments</p> <p>Provide a world-class S&T library supported by UC</p>	<p>Determination of continuing priorities and relationships with university institutes and centers</p> <p>A pipeline for future scientists and engineers</p> <p>Improved facilities for continuing education of employees</p>	<p>C.1.a</p>
Defense Programs				
<p>Improve Customer Confidence in the U.S. Nuclear Stockpile</p> <p>Enhance weapons assessments and certification by the end of FY2012 through:</p> <ul style="list-style-type: none"> ▪ Consistent applications of ASC tools, QMU, QC-1-Rev 10 	<p>Improve the annual assessment and certification process</p> <p>Work with LANL/SNL to enhance QMU technically – first phase by the end of FY2008</p>	<p>Continual improvement of assessment and certification process</p> <p>Achieve critical SFI resolutions within 1 year of receiving detailed production agency information</p>	<p>Technical rigor of annual assessment and certification process improved</p> <p>Earlier notification to NNSA and DoD of possible stockpile issues</p>	<p>C.1.b.1</p>

Mission/S&T Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
<ul style="list-style-type: none"> Assessment plans that provide increased documentation for each LLNL lead system <p>Work with NNSA and weapons laboratories to implement seamless national stockpile proposal by FY2012 enabling all laboratories to have technical understanding and access to surveillance data to perform in-depth peer review</p> <p>Application of Complex-wide resources to address issues</p>	<p>Develop and implement an ensemble-of-models approach to determine/quantify uncertainties where little or no experimental data exist</p> <p>Track progress in EVMS to resolve the issues identified by QMU analysis by the end of FY2008</p> <p>Apply EVMS to critical SFI efforts by end of FY2008</p> <p>Complete assessment plan for one system</p> <p>Identify process changes and software development needed to deliver surveillance information more quickly to engineers for evaluation by end of FY2008 (jointly with LANL)</p> <p>Identify novel surety collaborations and technologies for RRW and to address DBT (jointly with LANL)</p>	<p>Complete assessment plan for a second system</p>	<p>Closure of SFIs in a more timely fashion, enhancing DoD confidence in NNSA's ability to quickly close stockpile issues</p> <p>Increased documentation for each LLNL lead system ensures that potential failure modes and assessment M/U are tracked and updated with surveillance result cataloged</p> <p>Surety capabilities expanded</p>	C.1.b.1
<p>Stockpile Transformation</p> <p>Transform to an RRW-stockpile by FY2030</p> <p>Achieve a FPU within 3 years after authorization</p>	<p>Develop for NNSA's consideration, a proposal for conducting final design, prototype, and production of RRWs using combined LLNL/LANL team working with SNL within 6 months of contract award</p>	<p>Demonstrate a prototype RRW pit by FY2009. With NNSA concurrence, internal cost efficiencies will support the development of the prototype</p> <p>Work with NNSA, LANL, SNL, KCP, & DoD to complete development of process that will deliver FPU within 3 years of congressional authorization</p>	<p>Demonstration of prototype RRW pit, which will assist in defining requirements for LANL's CMRR building</p> <p>A successful demonstration provides significant risk reduction to the FPU schedule and in general, the RRW</p>	C.1.b.1

Mission/S&T Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
<p>Accelerate Predictive Capability</p> <p>Deliver a sustained 1+ petaflop weapon simulation system capability by FY2013</p> <p>Deliver an effective PF weapon simulation platform by FY2011</p> <p>Include ORNL in developing critical petascale data assessment technologies to reduce needs to simulation goals</p>	<p>Deploy petascale scaling platform</p>		<p>Improved predictive capability will simulate the performance, safety, and surety of the stockpile with quantified uncertainties</p> <p>Avoid surprises</p> <p>Benefit direct stockpile support, LEPs, SFI closures, RRW design, production support, and reduce costs of major experiments</p>	C.1.b.1
		<p>Consolidate to one weapon simulation system by the end of FY2009</p> <p>NNSA may elect to extend approach to LANL and SNL to realize additional cost efficiencies</p>	<p>Consolidation of current three-weapon simulation system approach into one results in reduced costs due to software development representing 85% of computing costs</p> <p>Optimize V&V and simulation resources; and cost efficiencies</p> <p>Strengthens assessment and certification options for less complex RRW</p>	C.1.b.1
<p>Resolve three significant weapon physics challenges:</p> <ul style="list-style-type: none"> ▪ Boost verification (jointly with LANL) by end of FY2013 ▪ Energy-balance verification by end of FY2010 ▪ Secondary hydrodynamics by end of FY2014 				

Mission/S&T Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
<p>Facility and Material Consolidation</p> <p>Provide option for closure of firing facilities at Site 300 and consolidation to DARHT by FY2010</p> <p>Accelerate implementation of high-explosive-driven hydrodynamic testing at NTS by FY2011 with full program support by FY2013 and closure of DARHT:</p> <ul style="list-style-type: none"> ▪ Develop portable diagnostics to support facility-free hydro testing to replace expensive limited test facilities ▪ Develop technology to contain hazardous debris ▪ Utilize facility-free experiments for future pulse-power experiments <p>B332 Category I and II nuclear material packaged for shipping by end of FY2011. Design and build customized shipping containers.</p> <p>Excess material from B332 (2/3 of inventory) to be packaged by end of FY2010</p> <p>Implement Site 300 model for sharing costs with non-NNSA customers by end of FY2010</p>	<p>In coordination with LANL, provide NNSA the option to consolidate hydro testing to two facilities (CFF/DARHT)</p> <p>Develop options for reducing Site 300 hydro test facility footprint by end of FY2008</p> <p>Operate JASPER as a user facility to efficiently deliver data required. Define when JASPER is no longer needed by end of FY2008</p> <p>Develop integrated prioritized Pu and hydro test plans with LANL by end of FY2008</p> <p>Work with NNSA, LANL, NTS to define DAF user model. Implement cost sharing model by the end of FY2008</p> <p>Assist NNSA with an AIM team to explore removing barriers to final material disposition</p> <p>Complete consolidation plan by end of FY2008 for engineering environmental test facilities from LLNL, LANL, and SNL to Pantex</p>	<p>Implementation plans approved by NNSA</p>	<p>Major cost savings and cost avoidances with facility consolidation, use of new technologies, and decrease in experimentation required</p> <p>Unnecessary and redundant tests eliminated, thereby reducing costs</p> <p>Standard approach makes full resources of LLNL nuclear operation more readily available to DAF</p> <p>With NNSA support, internal cost efficiencies to support packaging B332 materials</p> <p>Reduced time to FPU with a consolidated engineering test facility at Pantex</p>	<p>C.1.b.1</p> <p>C.1.b.1 A.1</p>

Mission/S&T Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
<p>NIF – National Ignition Facility</p> <p>Make NIF a world-class science user facility for HED science</p> <p>Achieve ignition with NIF and transition to full user facility operation before FY2012:</p> <ul style="list-style-type: none"> ▪ Conduct first ignition experiments in FY2010 in support of NIC ▪ Boost-gas validation by NIF by FY2014 ▪ Energy balance validation by NIF by mid-FY2010 ▪ Secondary hydrodynamics validation by NIF by end of FY2014 	<p>Begin developing NIF national users operations plan in FY2008</p> <p>Develop user facility model incorporating Battelle's experience with science-user facilities</p>	<p>Complete NIF project on time and on budget</p> <p>Conduct first non-ignition weapon physics experiments</p>	<p>Start of NIF mission with experiments for stockpile stewardship and basic science</p> <p>Key role in validating solutions to significant physics challenges</p>	C.1.b.1
Defense Nuclear Nonproliferation				
<p>Support nuclear nonproliferation in developing a Complex-like 2030 vision for a global nuclear materials regime supported by LLNS team. Three LLNS initiatives will support key elements of the vision:</p> <ul style="list-style-type: none"> ▪ Secure the International Nuclear Fuel Cycle to move toward proliferation-resistant fuel cycle designs and more robust material detection and tracking ▪ Translate data into actionable information with end-to-end exploitation ▪ Establish Coordinated Operations Support Center to provide coordinated response capability leveraging existing programs and U.S. government agencies 	<p>Establish coordination committee to share experience and lessons learned across the sites that the parent organizations manage</p> <p>Develop integrated S&T roadmap with LANS, PNNL, ORNL to improve material security and tracking, signature detection and monitoring, and exploitation of source data</p> <p>Apply nuclear material detection technologies and methodologies to meet arms control treaty verification requirements</p> <p>Develop strategy with NNSA, LANL, SNL to move to a new U.S.-Russian partnership model for joint nuclear nonproliferation program, weapons verification, and emergency response</p> <p>Establish a Coordinated Operations Support Center for 24/7 WMD assistance (NIRT, RAP, ARG, NAP, JTOT, NARAC)</p> <p>Demonstrate next-generation tool for intelligence analysis of nations and terrorist threats</p>	<p>Update S&T Roadmap</p>	<p>More effective nuclear nonproliferation program by leveraging parent organizations' experience from sites they manage:</p> <ul style="list-style-type: none"> ▪ Program implementation streamlined ▪ Duplicative efforts avoided and NNSA investments optimized ▪ Global nuclear materials assurance regime ▪ Capability to integrate formerly disparate technical elements into a coherent risk-based framework that supports informed decisions ▪ Excellence in emergency response maintained 	C.1.b.2

Mission/S&T Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
Science Programs and Environmental Technologies				
Grow non-NNSA-funded science programs by a factor of 2, to \$120M, by end of FY2012—a component of non-NNSA WFO growth	<ul style="list-style-type: none"> Implement research plans developed for each science sponsor challenge (Figure C-43) that will support NNSA Leverage advanced experimental user facilities to execute portfolio 	Update research plans	Capabilities and critical skills increased adding value to NNSA Infrastructure costs reduced	C.1.b.3
Provide key technical advances that support licensing of Yucca Mt. repository and take advantage of emerging technologies to lower costs of environmental restoration	Develop groundbreaking environmental restoration methods working with SRNL and Battelle and Terranear for application at LLNL	Apply restoration technologies	Costs lowered and clean-up at LLNL accelerated	C.1.b.5
LDRD				
Leverage LDRD to recruit and retain a world-class workforce focused on scientific areas of discovery and innovative solutions needed for mission breakthroughs	<p>Establish management structure to rigorously assess benefits of LDRD program</p> <p>Organize and manage LDRD by strategic thrust areas focusing on desired outcomes:</p> <ul style="list-style-type: none"> Develop S&T roadmap for each area. Roll up into the Laboratory S&T roadmap to form entire S&T portfolio strategy Hold workshops with sponsors Enhance rigor and standards in peer review Track projects using EVMS by end of FY2008 Link LDRD-seeded innovations to technology transfer accelerator Develop joint roadmaps with LANL for LDRD Update with LANL S&T roadmap for national/global security 	Update S&T roadmaps supported by workshops	<p>Value of each dollar spent maximized</p> <p>Thrust areas aligned with NNSA mission</p> <p>Quality scientific management in a more cost-effective way</p> <p>Input from sponsors on their priorities and needs resulting in more effective LDRD program</p> <p>Transition of R&D to commercialized products expedited</p>	C.1.b.8 C.1.a C.2

FIGURE H-12. EXPANDING WORK FOR OTHERS

Key: = Efforts and contributions by our parent organizations = Coordination within the NWC

Work for Others Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
Energy Programs				
<p>Grow energy programs from \$30M to \$90M in 7 years in four thrust areas:</p> <ul style="list-style-type: none"> ▪ Proliferation-resistant nuclear power ▪ Sustainable carbon-emission-free fossil energy ▪ Renewable energy sources ▪ Hydrogen production and delivery for transportation industry <p>Develop in seven years an LLNS hydrogen car capable of range of 600 miles</p>	<p>Develop research programs as defined in plans (Figure C-44) integrating LLNS team capabilities</p> <p>Participate in Battelle's integrated energy initiative, including working group leadership</p> <p>By end of FY2008, LLNS will create a joint LLNL-PNNL subsurface science institute to address permanent disposition of the CO₂ and in situ development of unconventional resources</p>	<p>Update research programs plans</p>	<p>Non-NNSA growth that is synergistic and eases NNSA's burden of maintaining critical skills and infrastructure</p> <p>Acceleration of the design and verification of approaches to subsurface CO₂ dispersal</p> <p>Doubled current DOE driving goals and design options for commercial development provided</p> <p>Enhanced scientific discovery in major energy and global warming issues</p>	C.1.b.4
Department of Homeland Security				
<p>Focus homeland security on:</p> <ul style="list-style-type: none"> ▪ Innovative solutions to reduce risks of WMD ▪ Decision tools and technologies to strengthen operational capabilities of intelligence, law enforcement, emergency response agencies ▪ Integrated intelligence analysis and technical solutions to reduce risk and ensure effective response and recovery <p>Support DHS needs and strengthen critical mission skills for NNSA with LLNL Centers of Excellence:</p> <ul style="list-style-type: none"> ▪ Forensic Science Center ▪ NARAC-IMAAC ▪ Radiation Detection Center ▪ Center for Predictive Science 	<p>Define detailed strategy for each component of DHS (Figure C-49):</p> <ul style="list-style-type: none"> ▪ Develop marketing plan with team of CBRNE experts from parent organizations ▪ Prepare gap analysis of DHS requirements and budgets with LLNL/LLNS capabilities and S&T roadmap ▪ Develop and propose equity investment model for DHS work working with SNL/CA, LANL, ORNL, PNNL; coordinate plan with S&T roadmap 	<p>Update program plan</p>	<p>Roadmaps that guide investment decisions, minimize duplication of efforts, and enable coordination and integration of work between DHS and NNSA</p> <p>Ensured focus in areas supporting NNSA and alignment with core competencies</p> <p>DHS investments ensured for long-term sustainability of their programs</p> <p>Model that defines Complex-wide long-term investment in facilities, personnel, and critical capabilities for DHS efforts</p>	C.1.b.6

Work for Others Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
Work for Others (Includes all WFO at LLNL, e.g., Science, DHS, Energy)				
Aggressively grow WFO to retain Laboratory's ability to execute NNSA missions Increase non-NNSA work by \$450M in 7 years	Develop a WFO business development approach focused on needs of sponsors and based on Battelle/UC experience; review against S&T roadmap (Figure C-57)	Ongoing implementation of business development plan	Work that complements/ contributes to NNSA competencies and essential facilities Overhead and indirect costs defrayed Infrastructure investments shared Funding base to LDRD increased Talent attracted and retained Proving ground for developing leaders DOE's interagency status enhanced	C.1.b.7
Advancing Science				
Increase technology deployments Double industry-funded programs to \$20M in the next 5 years Double licenses to 40 within 5 years Bundle IP from LLNL with IP from other Battelle affiliated laboratories within 3 years. Initiate at least three new LLNS team strategic partnerships	Participate in Battelle's monthly Commercialization Council to work on common approaches Access Battelle Technology Maturation Fund and Battelle Ventures Establish Industrial Advisory Board (IAB): <ul style="list-style-type: none"> ▪ Includes Chief Technology Officers (CTOs) of the team, Battelle Ventures, and invited CTOs ▪ Identifies technologies to mature and bring to market Industrial portal – Work with NNSA to pursue options for acquiring real estate east of LLNL	IAB to review OIP semi-annually and to recommend adjustment in approaches	Effective public and private sector collaboration and technology transfer supporting NNSA missions Royalties reinvested in R&D compatible to NNSA missions Assistance provided to Office of Industrial Partnerships (OIP) at LLNL in commercialization of technologies Increased unclassified space, which can be used to support industrial-sponsored research	C.2 C.2 D.4

FIGURE H-13. IMPROVING OPERATIONS AND EFFICIENCY

Key: = Efforts and Contributions by our parent organizations = Coordination within the NWC

Operations Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
<p>ES&H</p> <p>Implement a zero accidents philosophy and communicate expectations to all employees</p> <p>Centralize ES&H policy and requirements, deploy safety professionals to work directly in Integrated Project Teams (IPTs)</p> <p>Apply for VPP Star Status by end of FY2010</p>	<p>Receive ISM certification under new contract</p> <p>Assign AIM teams to assess Laboratory's safety management program and radiological safety program; develop action plans</p> <p>Use Six Sigma PIPs to change work processes</p> <p>Conduct safety leadership workshops to develop strong consistent leadership for all supervisors. All supervisors to be trained by the end of FY2008.</p> <p>Establish zero accident teams for all programs and operations by end of FY2008</p> <p>Deploy and implement behavior-based safety (BBS) and INPO Human Performance Programs</p> <p>Adopt Bechtel's Safety Task Analysis and Risk Reduction Talk (STARRT) job analysis</p>	<p>Apply for ISO 140001 certification</p> <p>Transfer Bechtel's Safety Simulator technology to support training beginning FY2009</p> <p>Implement Laboratory-wide safety management corrective action tracking system and establish Corrective Action Review Board</p>	<p>Institutionalized safety culture</p> <p>Enhanced worker ownership of safety program through consistent processes</p> <p>Improved documentation that best practices are being implemented</p> <p>Performance improved with 50% cost savings through training</p> <p>Zero accident teams integrate ES&H culture into all activities</p> <p>Corrective action tracking improved</p> <p>Improved consistency and reliability of work planning and control</p>	D.2
<p>Nuclear Safety</p> <p>Consolidate nuclear safety-related personnel into a new centralized organization</p> <p>Deploy trained personnel to IPTs/nuclear facilities</p> <p>Move from expert-based to process-based approach that will meet NNSA and DNFSB expectations</p> <p>During transition develop:</p> <ul style="list-style-type: none"> ▪ Improvement plan for startup and restart of nuclear facilities ▪ Configuration management and systems 	<p>Convene AIM team to evaluate nuclear operations and to develop action plan</p> <p>Conduct Six Sigma PIPs on nuclear operations to streamline processes</p> <p>Complete Conduct of Operations Improvement Plan by end of FY2008</p> <p>Develop at LLNL and LANL, a common safety basis training curriculum</p> <p>Complete Nuclear Operations Training</p>	<p>Implement action plans developed by AIM team</p> <p>Initiate Conduct of Operations Improvement Plan</p> <p>Initiate actions from the Training Improvement Plan</p>	<p>Rigorous standard-based process to achieve consistent safe nuclear operations across the Laboratory</p> <p>Improved performance while reducing costs</p> <p>Consistency between laboratories and improved understanding of requirements</p>	D.3

Operations Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
engineering implementation plan	<p>Improvement Plan by end of FY2008</p> <p>Establish corporate Nuclear Safety and Operations Council with nuclear facility professionals from NNSA sites managed by parent organizations; conduct in-depth reviews of performance beginning FY2008</p> <p>Apply Bechtel's STARRT/JHA job analyses</p> <p>Implement laboratory-wide conduct of engineering program</p> <p>During first six months of the contract, create and implement a ConOps index as a leading indicator of conduct of operations performance and improvement</p> <p>Implement a nuclear facilities metrics program</p> <p>Implement the Facility Evaluation Board (FEB) assessment process by April 2008</p>	<p>In-depth review of performance by professionals ongoing</p> <p>Assess and track performance</p> <p>Undertake field performance reviews of facilities as operations</p>	<p>Consistency of nuclear operations across parent-managed NNSA sites; progress toward common approaches between sites</p> <p>Actions to improve LLNL program defined</p> <p>Consistency and reliability of work planning and control improved</p> <p>Criteria for performance assessment defined</p> <p>Process established for field assessment</p>	D.3
<p>Emergency Operations</p> <p>Submit applications for emergency management accreditation by end of FY2010</p> <p>Accelerate onsite employee notification process to mass notification system—complete by September 2010</p> <p>Address consolidation of SNL/CA and LLNL emergency management programs to save costs and reduce difficulties involved in managing two separate programs</p>	<p>Bring emergency management program into full compliance with DOE Order 151.C by end of FY2008</p> <p>Planning</p> <p>Adopt parent organizations' processes for hazards assessments, chemical management inventory control, and conduct of operations; integrate with facility basis documents</p> <p>Complete joint emergency planning with communities</p> <p>Develop Continuity of Operations Plan (COOP)</p>		<p>Consistent basis for risk decisions and reduced costs for emergency management program</p> <p>Identification and establishment of alternate facilities and capabilities to be used to restart</p>	D.4

Operations Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
			essential missions	
	<p>Acquire property adjacent to LLNL's east boundary</p> <p>Preparedness Establish centralized emergency operations staff 24/7 Accelerate completion of Shelter-In-Place Protection Plan Accelerate completion of Site Evacuation Plan</p> <p>Response Outsource LLNL fire department on the LLNL site to local fire dept. Establish BWXT Real-Time Accident Data System by end of FY2008</p> <p>Accreditation Deploy AIM team to identify gaps to achieving accreditation and deliver action plan by March 2008</p>		<p>Reduced risk of hazardous material exposure and portal provided for re-research and technology development</p> <p>Faster, more streamlined response Challenges of security-related events addressed</p> <p>Effective fire protection and reduced costs Data system for real-time accidents allows for faster transition to action</p> <p>Gaps identified between the existing program and accreditation guide to help with developing an improvement plan</p>	D.4 C.2
<p>Security Embed zero security incident expectations into workforce Implement approaches that enhance security:</p> <ul style="list-style-type: none"> ▪ Reduce cost of security through technology, graded risk management, and outsourcing ▪ Deploy Argus in more cost-effective manner ▪ Invest in IT modernization with built-in security features ▪ Improve vulnerability assessments 	<p>Personnel S&S professionals join BWXT Security Information Exchange on best practices</p> <p>Appoint Roger Hagen-gruber as LLNS and LANS CSO to provide strategic directions, resource planning, and policy oversight. Work with other NNSA sites managed by the parent to share innovation and best practices</p>	Continued exchange of information, best practices and technologies	<p>Increased knowledge of best practices</p> <p>Integration, consistency and economies across two laboratories achieved for security</p>	D.1

Operations Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.	
	FY2008	FY2009			
<ul style="list-style-type: none"> ▪ Transfer all Category I/II material from site ▪ Leverage WFO and LDRD investments for security technology solutions ▪ Complete people data base by the end of FY2010 	<p>Foreign Nationals Establish Foreign National working group to mitigate security risks that will still enable foreign nationals to contribute to mission</p>	Ongoing efforts of the working group	Common foreign national practices at LLNS and LANS ensured by CSO as member of the working group	D.1	
	<p>Protective Force (PF) Study alternative contracting options Determine viability of single subcontractor to manage PF at LANL and LLNL Support combining PF at SNL/CA and LLNL</p>	With NNSA approval, initiate efforts to manage PF forces as defined in the studies		Consistency and cost savings improved from restructured PF operations Potential annual savings for LLNL/SNL consolidation has cost savings of \$700K annually	
	<p>Security Technology Integrate state-of-the-art subsystems into Argus Deploy Argus and propose management of Tech Depot by small business enterprise (SBE) partner, Pro2Serve</p>	Continue deployment of Argus		Updated technology that is more effective at lower costs Less costly deployment by Pro2Serve Customer support by Tech Depot strengthened	D.1
	<p>Develop strategy to market Argus to other federal government customers</p> <p>IT Modernization Create a new unclassified non-public network where no unclassified sensitive information resides</p> <p>Expand people database Initiate IT configuration management initiative</p>	Continue efforts on IT modernization		Expansion of customer base will further reduce costs Foreign national access supported Inadvertent access to sensitive information minimized Cost savings of \$7.5M in 3 years due to elimination of two-thirds foreign national security plans Handling of site access for security protection improved	D.1 E.4

Operations Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
	<p>Security Vulnerability</p> <p>With NNSA's agreement, develop a vulnerability assessment process to enhance Complex security. GEM Technology with LLNL Threat Mitigation Analysis Group will provide expertise</p>		Protection maximized, costs minimized, and safety and security interface optimized	D.1
<p>Financial Management</p> <p>Reduce Laboratory support costs 20% (\$150M annually) by end of FY2010:</p> <ul style="list-style-type: none"> ▪ Restructure organization ▪ Realign workforce ▪ Establish process improvements and cost-reduction targets for each directorate reporting to PAD for Operations and Business <p>Implement phase II cost model by September 2010</p> <p>Complete financial system element of BSIP by end of FY2010</p>	<p>Personnel</p> <p>Financial resource personnel report to Financial Operations by October 1, 2008</p> <p>Cost Model</p> <p>Initiate planning for refining the cost model</p> <p>Business Systems</p> <p>Initiate upgrade of business and financial systems (BSIP).</p>	<p>Implement phase I cost model by September 2009</p> <p>Continue system upgrades</p>	<p>Deployment of standard financial processes</p> <p>Internal financial controls improved</p> <p>Duplicate activities eliminated</p> <p>Number of personnel reduced</p> <p>Simple rate structure to analyze true cost of business/equity to all clients. Ensure appropriate use of service centers</p> <p>Financial system upgrade that automates reporting, eliminates duplication, and supports EVMS</p>	<p>E.2 D</p> <p>E.2</p> <p>E.2 E.4 C.1.a</p>
	<p>NWC Coordination</p> <p>Partner with LANS on business system development. Assess consolidating payroll accounts payable and travel expense processing</p> <p>Minimize cost for pension and benefits program development by replicating LANS's system</p> <p>Manage pension plans in common with LANS</p>	<p>Partner with LANS on business systems development. Use common purchase card, travel card, and travel services</p>	<p>Costs reduced from consolidating routine operations with LANS</p> <p>Costs reduced from common business approach/selection of COTS</p> <p>\$1M less implementation cost than LANS cost</p> <p>\$3M per year saved from consolidated management approach</p>	E.2

Operations Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
<p>Purchasing/SBE</p> <p>Build on LLNL's procurement system and transform it into a world-class supply chain management system</p> <p>Establish LLNL mentor-protégé program. Award appropriate noncompetitive subcontracts to DOE designated protégés</p> <p>Support NNSA's strategic sourcing and centralized purchasing activities to advance KCP's sourcing efforts for the Complex</p>	<p>Supply Chain Management</p> <p>Consolidate all work processes and personnel related to supply chain into one organization</p> <p>Increase LLNL small business goal from 38% to 45% for FY2008</p> <p>Assign a Small Business Advocate reporting to SMC manager (PSBA)</p> <p>Convert major elements of supplemental labor subcontract to SBEs</p> <p>Establish a Subcontractor Technical Representative (STR) Program</p> <p>Administer Bechtel's ASSET to enhance skill levels/augment staffing</p> <p>NWC Performance</p> <p>Enhance NNSA's supply chain initiatives in coordination with KCP:</p> <ul style="list-style-type: none"> ▪ Assign site champion ▪ Provide data, resources, systems to support KCP <p>Collaborate with LANS for procurements and common services</p>	<p>Apply Six Sigma to work processes in supply chain</p> <p>Support to KCP is ongoing</p>	<p>Efficiencies and improvements by optimizing the entire supply chain</p> <p>SBE goals met</p> <p>Risks reduced by implementing an STR program and by the increased oversight on large procurements</p> <p>Costs reduced by 15% (based on experience)</p> <p>KCP's procurement-to-reduce costs leveraged throughout NWC Complex</p> <p>Potential cost reduction from potential collaborations with LANS</p>	<p>E.3 A.4</p>

Operations Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
<p>Information Resources Management</p> <p>Consolidate, upgrade, and modernize IRM system to improve security, performance, and agility, while reducing costs by \$40M in 3 years (<i>Part of the reduction of support costs 20%</i>)</p> <p>IT modernization effort incorporates full initiatives. Key elements are to be completed by FY2010. Standard nonscientific hardware and software will be used</p> <p>No increase in current IT overhead funding. Make improvements with savings obtained.</p> <p>Apply Lean Six Sigma to continuously improve systems. Initial targets:</p> <ul style="list-style-type: none"> ▪ Records management ▪ Facilities asset management ▪ Safety and environmental systems ▪ Device life-cycle standards 	<p>Modernize IRM</p> <p>Expand and relocate the business data center to become the centerpiece for server consolidations</p> <p>Initiate replacement of general ledger financial system with Oracle project accounting (<i>Noted in E.2 as part of BSIP</i>)</p> <p>Create a new unclassified non-public network where no unclassified sensitive information resides</p> <p>Establish one NWC Coordination Chief Information Advisor (CIA) at LANL and LLNL to promote best practices and common solutions</p>	<p>Upgrade people database to incorporate expanded information for all LLNL workers. Retire over 100 data feeds (BSIP)</p> <p>Implement core approach for IT configuration management and network device regulation</p> <p>Apply standard tools and methods to records management systems (RMSs) – engineering and enterprise</p>	<p>Costs reduced by \$40M in 3 years</p> <p>Costly software feeders and spreadsheet transfer stations eliminated</p> <p>EVMS and project management supported</p> <p>Cost lowered to support FISMA/ NNSA certification and accreditation</p> <p>Central home for records management</p> <p>Security strengthened with key requirements for cybersecurity authorizations and site access</p> <p>Individual security plans for two-thirds of foreign national workforce eliminated</p> <p>Multisite consistency and interoperability</p>	<p>E.4</p> <p>E.2</p> <p>D.1</p> <p>C.1.a</p>

FIGURE H-14. ADDRESSING WORKFORCE MANAGEMENT AND REALIGNMENT

Key: = Effects and Contributions by our parent organizations = Coordination within the NWC

Workforce Realignment Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
<p>Continually realign workforce over the life of the contract to reflect efficiency gains, changes in mission needs, funding profile, WFO growth, NIF startup, direct-to-indirect ratio optimization and NWC integration:</p> <ul style="list-style-type: none"> ▪ Reduce support costs by 20% within 3 years ▪ Reduce defense program staffing by 25% as a percentage of the overall workforce by growing relevant WFO programs to retain essential skills <p>Improve direct-to-indirect ratio by 20% by FY2015</p> <p>A strong centralized Strategic Human Capital Management (SHCM) Directorate provides the leadership to ensure availability, realignment, and maintenance of workforce excellence</p>	<p>Defense Programs</p> <p>Achieve an additional 2%–3% workforce reduction through internal efficiency gains above the expected 2% reduction</p>	<p>Continue annual 2% + 2-3% defense program workforce reductions per year</p>	<p>NNSA objectives in workforce reductions met. Savings from additional workforce reductions reinvested into the R&D program (with NNSA support)</p>	<p>C.1.b.1 C.1.a</p>
	<p>Direct-to-Indirect Ratios</p> <p>Optimize ratio by preparing annual budget using a zero-based approach</p>	<p>Continue zero-based budgeting process</p>	<p>Each manager working closely with project control experts to assess resources required to achieve scope and schedule of work</p>	<p>E.1</p>
	<p>Recruitment/Retention</p> <p>SHCM AD with PADs, ADs, PDs will coordinate recruiting needs and efforts. The S&T roadmap will support defining future workforce requirements</p> <p>Publish career ladders to define how employees can define their career path</p> <p>AIM Team</p> <p>AIM team reviews and recommends improvements to Recruitment and Retention program during 4th quarter</p>	<p>Continue ongoing improvements to recruitment/retention programs based on AIM team recommendations</p>	<p>Critical and essential skills available to meet mission requirements</p>	<p>E.1</p>

Workforce Realignment Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
	<p>Succession Planning Define employee's skills and knowledge bases Define future critical and essential skill requirements based on S&T plan Identify potential successor employees Prepare employee development action plans for critical skill positions</p> <p>Performance-Based Leadership (PBL) Conduct PBL training for all managers Initiate rollout of PBL training for supervisors</p> <p>Workforce Review Define annual staffing requirements by Director's workforce reviews and zero-based budgeting</p>	<p>Continue development of action plans to close gaps in skill and knowledge bases, expand to include essential skills Implement and track success of employee development plans</p> <p>Complete PBL training for all supervisors</p> <p>Continue annual workforce reviews</p>	<p>Critical skills and knowledge retained by future generations of employees</p> <p>PBL will be used as the primary tool to manage behavior and employee performance through a modern coaching model</p> <p>Workforce realignment and rightsizing</p>	<p>E.1</p> <p>E.1</p> <p>E.1</p>
<p>Double the number of postdocs from 150 to 300 by end of FY2010 Increase number of students by 50% by end of FY2010</p> <p>If NNSA is interested, SHCM Director coordinates multisite effort</p>	<p>Workforce Pipeline Increase number of postdocs and student employees to strengthen pipeline</p> <p>Work with NNSA and other NWC sites to compete each site's critical and essential skills needs. Work with pre-selected universities to develop curricula and training programs tailored to NNSA needs</p>	<p>Expand efforts to combine recruiting</p>	<p>Postdocs and student programs as feeders to a trained staff with NNSA essential skills and a commitment to science in support of national and global security</p> <p>More diverse pool of graduates from which to recruit for all NWC sites Joint recruiting can offer graduates a multisite career path with rotational assignments</p>	<p>C.1.a</p> <p>E.1</p>

H.2.2 PARENT ORGANIZATION EFFORTS AND CONTRIBUTION

The LLNS parent organizations are fully committed to providing the oversight and support that LLNL will need to accomplish the goals and commitments made in this proposal. The team is dedicated to assisting NNSA in achieving the Complex 2030 vision by leveraging our presence at five of the eight NWC sites to eliminate overlaps and redundancies in scope, facilities, and resources.

Much of the improvement envisioned for LLNL is tied to the best practices, processes, systems, tools, and expertise available through the collective capability of the parent organizations. Adoption of best practices will jump-start improvement in efficiency, achieving dramatic cost reductions. Figure H-15 provides a summary of our parent organization key efforts and contributions.

FIGURE H-15. EFFORTS AND CONTRIBUTION OF THE PARENT ORGANIZATIONS

Parent Commitments Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
LLNL Governance				
<p>Board of Governors</p> <p>Primary oversight body with authority to guide, control, direct, and measure the Laboratory and its personnel</p> <p>Executive Committee</p> <p>Decision-making body of the LLC responsible for oversight of laboratory operations</p> <p>Board Committees</p> <p>Committees support the Board in meeting its responsibilities: S&T, Mission, Business & Operations, NWC Integration, Ethics/Audits, and Nominations/Compensation Committees</p> <p>Contractor Assurance Officer</p> <p>Reports to the Laboratory Director and the Board. CAS assessments will be available as input to the Board's oversight</p> <p>Other</p> <p>The CFO, Laboratory Counsel, and Laboratory Auditor report to the LLNL Director and the Board</p>	<p>Board/Committee Activities Planned</p> <p>Board meetings scheduled quarterly; Executive Committee meets quarterly and as needed</p> <p>Committee meetings scheduled quarterly to review strategic direction, related policies, and performance reviews in each of their area of responsibilities</p> <p>S&T Committees establish metrics for portfolio assessments of both LLNL and LANL</p> <p>LLNS company office staff reports on the status against planned activities to the Board and Laboratory Director quarterly and to NNSA as required</p> <p>CAO reports to the Board quarterly</p> <p>The CFO, Laboratory Counsel, and Laboratory Auditor report annually to the Board or as required</p>	<p>Activities depend on evaluations of FY2008 accomplishments and issues</p>	<p>LLNL commitments and expectations met</p> <p>Necessary support required for success</p> <p>Annual assurance letter and oversight plan administration</p> <p>Oversight support and advice on future trends and challenges</p> <p>Activities, accomplishments, schedule, and cost status documented and issues and corrective actions highlighted</p>	<p>A.2.1</p> <p>Vol. I-I</p> <p>Parent Oversight Plan</p> <p>C.1.a</p>

Parent Commitments Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
<p>Parent organization experts conduct periodic functional management assessments in all areas of laboratory operations</p> <p>Assessments supplement Board activities and information received from CAO ensures the Laboratory is meeting commitments and expectations</p>	<p>Functional Management Assessments</p> <p>Conduct 26 scheduled assessments covering all primary functional and programmatic areas</p> <p>In addition, six contingency assessments can be scheduled as needed</p>	<p>Priority and frequency of assessment in the out years will be determined by initial assessment findings</p>	<p>Quality performance ensured by conducting evaluations, measuring performance, and monitoring risks and internal controls</p> <p>Effectiveness of implementation of best practices gauged</p> <p>Functional personnel led by mentors who determine if adequate resources are available to support LLNL</p>	<p>A.2.1 Vol. I-I Parent Oversight Plan C.1.a</p>
LLNS Support				
<p>AIM Teams</p> <p>Capitalize on reachback capabilities of the parent organizations to assemble experts to assess and improve specific operations at the Laboratory</p> <p>Director or the Board will identify critical areas of concern, or where there is an opportunity for significant improvement</p> <p>Parent organizations will fund teams in FY2008</p>	<p>AIM Teams</p> <p>Eight AIM teams have been identified for FY2008:</p> <ul style="list-style-type: none"> ▪ ES&H – Assess safety management program ▪ Emergency Management – Complete a gap analysis to determine readiness for certification ▪ NWC – Assist in exploring methods for removing barriers to final Pu material disposition ▪ Nuclear Operations – Develop Conduct of Operations Implementation Plan and an enhanced training program ▪ Strategic Human Capital—Assess recruitment and retention program against best practices 	<p>Determine priority and frequency of AIM teams based on initial assessments findings</p>	<p>Experienced and expert assistance provided to the Laboratory to solve problems and define approaches for significant improvements in selected areas</p>	<p>A.2.1 Vol. I-I Parent Oversight Plan C.1.a</p> <p>D.2</p> <p>D.4</p> <p>C.1.b</p> <p>D.3</p> <p>E.1</p>

Parent Commitments Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
	<ul style="list-style-type: none"> ▪ Training – Assess the extent training should be provided by a central organization or a functional group ▪ CAS – Review approach and status of the Contractor Assurance System (CAS) ▪ Radiological Safety – Assess radiological safety program 			E.1 A.2 D.2
Management of Pension and Benefit Plans	Common management for pension and benefits plans for LANS and LLNS		\$3M/year saved by coordinated approach	E.2
Company Nuclear Safety and Operations Council Establish council to drive effective approaches across sites managed by the parent organizations	Nuclear facility experts will conduct in-depth reviews. Council will meet every 6 months to assess performance and provide assistance	Nuclear Safety & Operations Council to continue bi-annual meetings	Enhanced coordination of nuclear safety management across the Complex for sites managed by parent organization companies Consistency across sites	D.3
Parent Best Practices Apply parent organization best practices to assist the Laboratory in meeting objectives in specific areas EVMS Provide tools and assistance to use EVMS for managing R&D programs by FY2010 Complete upgrade of financial system to support EVMS by FY2010	Support the Laboratory in defining a WBS Apply Bechtel project management tools Assign Bechtel project control professionals to augment current staff Train program/project managers on EVMS Define graded approach in coordination with LANL	Continue support for expansion of EVMS in managing programs	Improved performance with applications of best practices and tools Systematic performance tracking and identification of issues for management action Consistent application of EVMS between LLNL and LANL	C.1.a E.2 E.4

Parent Commitments Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
<p>Six Sigma/PBL Institute Six Sigma program to achieve 20% support-cost reductions in 3 years</p>	<p>Assign a Master Black Belt and full-time trainer from Bechtel</p> <p>Institute PIP projects: Each operational functional area will establish performance targets; establish PIP teams</p>	<p>Complete initial PBL training for all supervisors</p> <p>Assessments and benchmarking will identify additional needs for improvements, and resources and systems that will be applied</p>	<p>Achievement of dramatic cost reductions with improved work processes</p> <p>Behavior and employee performance management through a modern coaching model (PBL)</p>	<p>C.1.a E.2 D.3 D.2 E.3</p>
<p>Conduct Bechtel Performance Based Leadership (PBL) training for managers and all supervisors</p>	<p>Provide training for program/project managers in Six Sigma and PBL</p>			<p>E.1 C.1.a</p>
<p>Operations and Business Implement management tools to improve performance</p>	<p>ES&H/Nuclear Operations Adopt Bechtel's Safety Task and Risk Reduction Talk (STARRT) job analysis</p> <p>Emergency Operations Establish BWXT real-time accident data system</p> <p>Security Join BWXT Security Information Exchange on best practices</p> <p>Supply Chain Management Administer Bechtel's ASSET, a tool to assess and enhance skill levels Augment staffing</p>	<p>Transfer Bechtel Safety Simulator technology</p>	<p>Cost savings with improved performance</p> <p>Faster transition to action</p> <p>Increased knowledge of best practices</p> <p>Based on experience, procurement costs reduced 15%</p>	<p>D.2 D.4 D.1 E.3</p>
<p>University Programs Provide programs and facilities to support research and education</p> <p>Improve strategic university relations</p>	<p>Texas A&M University System will create and provide joint graduate programs in international security/policy</p> <p>Transition UC Davis facility onsite to an engineering graduate teaching campus</p>	<p>Provide world-class S&T library supported by UC</p>	<p>Improved programs and facilities for research and continuing education of employees</p>	<p>C.1.a</p>

Parent Commitments Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
LLNS Support in Energy Programs	Create a joint LLNL-PNNL subsurface science institute to address permanent disposition of CO ₂		Merger of efforts to solve major energy and global warming issue	C.1.b.4
Commercialization Integrate Battelle's commercialization initiatives, programs, and workshops Provide support in rapidly growing WFO programs and in technology transfer	Participate in Battelle's Integrated Energy Initiative, including working group leadership Participate in Battelle's monthly Commercialization Council. Access Battelle Technology Maturation Fund and Battelle Ventures Establish an Industrial Advisory Board to identify technologies to mature and bring to market (modeled after PNNL laboratory)	Continue efforts by the IAB, Commercialization Council, and Integrated Energy Initiatives	Non-NNSA growth that is synergistic and eases NNSA's burdens of maintaining critical skills and infrastructure Effective public and private sector collaboration and technology transfer supporting NNSA mission Access to funding to support commercialization opportunities	C.2

H.2.3 ENHANCING INTEGRATION BETWEEN LLNL, LANL, AND REST OF THE NWC

The LLNS leadership team will take the difficult actions needed to meet today’s stockpile stewardship deliverables and to solve tomorrow’s challenges. Our approach relies on our parent organizations’ proven expertise in innovation and our partnership with NNSA to eliminate Complex-wide redundancies, find new ways of doing business, enhance cooperation among all sites, adopt a life-cycle approach to weapons, and increase reliance on validated simulations versus experimentation.

LLNS will start by significantly enhancing integration, cooperation, and trust between LANL and LLNL and then extending these efforts to the other NWC sites. While retaining the technical independence of LANL and LLNL, there are many areas where we can make the two laboratories and the NWC more interdependent and free internal resources that, with NNSA agreement, can be redirected toward solving Complex challenges.

In Figure H-16, we propose a number of initiatives that support the Complex 2030 vision. They will require improved coordination and integration across the NWC to succeed. With NNSA concurrence, a number of these initiatives can be accomplished within the five NWC sites managed by our parent organizations, while others require integration with KCP, SNL, and NTS.

FIGURE H-16. ENHANCE COMMUNICATION, COOPERATION AND INTEGRATION OF THE NWC

NWC Communication Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
NWC Integration				
Performance Fee Greatly enhance communication, cooperation, and integration across the NWC to accelerate achievement of the Complex 2030 vision. Coordinate and propose initiatives that will have multisite incentive fees	Drive enhanced multisite integration with an incentive fee. Dedicate 10% of fee pools at each site. Our parent organizations have agreed to support this approach that will have multisite incentive fees	Accelerate achievement of Complex 2030 vision with continued multisite incentive fee	High priority attention and support from all parent organization firms for major multisite integration initiatives for Complex 2030.	C.3
Business Practices Promote seamless business practices across NWC in collaboration with NNSA and the NWC Integration Committee	Identify three areas for development of practices across the NWC sites, e.g., payroll mechanisms, project management tools, training, RTBF management, risk methodologies, etc.	Continue evolution of uniform business practices across the NWC	Reduced costs and improved performance and ability for program managers to utilize SMEs from other NWC sites	C.3
Contractor Assurance Develop CAS-driven dashboard to provide transparency for NNSA to monitor performance on multisite activities across the NWC	Identify high-level metrics for select multisite initiatives. Establish initial metrics within the first 6 months of the contract startup Promote compatible CAS at sites to support seamless multisite monitoring	Expand the common set of metrics used to monitor the NWC sites	Strengthened ability for NNSA to monitor performance across the NWC	C.3

NWC Communication Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
<p>User Facilities</p> <p>Develop a common model for managing national user facilities—a non-entitlement approach to user facilities. Initiate effort with the NIF user facility</p>	<p>Begin facility model for NIF incorporating Battelle's experience with science user facilities. Use QMU to prioritize experimental proposals</p>	<p>Modify approach as required for applications to other user facilities. Complete NIF project on time and on budget</p>	<p>Greater cooperation among users, optimized performance of user facilities, and reinforcement of NNSA national priorities</p>	<p>C.3 C.1.b.1</p>
<p>Core Competencies</p> <p>Promote interdependence and cost efficiency by relying on shared national core competencies in select areas</p>	<p>Develop criteria for sharing core competencies and methodology for assuring that competency is available on national priority bases</p>	<p>Develop process and scope for identifying initial target areas</p>	<p>Enhanced cooperation and integration with larger national laboratory community; support for NNSA in managing costs and reducing risks in S&T programs</p>	<p>C.3 C.1.b.1</p>
<p>Seamless National Stockpile</p> <p>Work with NNSA and weapons laboratories to implement seamless national stockpile proposal by FY2012</p> <p>Enable all laboratories to access technical and weapons surveillance data</p>	<p>Engage LANL and SNL in defining transition to proposed seamless national stockpile</p> <p>Develop coordinated plan to implement national archive incorporating all NWC sites by end of FY2008</p>	<p>Initiate plan to expand technical understanding of all stockpile systems. Implement access to surveillance data</p>	<p>Strengthened peer review</p> <p>Improved certification process</p> <p>Problems resolved faster using information resources of all laboratories, production sites, and NTS</p>	<p>C.1.b.1</p>
<p>RRW</p> <p>Use RRW as catalyst for development of integrated and responsive enterprise</p>	<p>LLNL Laboratory Director will work with LANL and SNL Directors to propose joint LLNL/LANL/SNL teams for approved RRW full-scale engineering development programs</p>	<p>With NNSA approval, initiate efforts on RRW development program</p> <p>Complete development of process that will deliver FPU within 3 years of Congressional authorization working with NNSA, LANL, SNL, KCP, and DoD</p>	<p>Best capabilities of the NWC brought to bear on RRW development programs</p> <p>Greater NWC integration, accelerating transformation to Complex 2030</p>	<p>C.1.b.1</p>
<p>Facility and Material Consolidation</p> <p>Provide option for closure of firing facilities at Site 300 and consolidation to DARHT by FY2010</p> <p>Accelerated implementation of high-explosive-driven hydrodynamic testing at NTS by FY2011 with full program support by FY2013 and closure of DARHT</p>	<p>In coordination with LANL, provide NNSA the option to consolidate hydro testing to two facilities (CFF/DARHT)</p>	<p>Implement plans approved by NNSA</p>	<p>Major cost savings and cost avoidance with facility consolidation, use of new technologies, and decrease in experimentation</p>	<p>C.1.b.1 C.3</p>

NWC Communication Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
<p>Develop portable diagnostics to support facility-free hydro testing replacing expensive limited test facilities</p> <p>Develop technology to contain hazardous debris. Utilize facility-free experiments for future pulse-power experiments</p>	<p>Develop integrated prioritized Pu and hydro test plans with LANL by end of FY2008</p> <p>Work with NNSA, LANL, NTS to define DAF user model. Implement cost sharing model by end of FY2008</p> <p>Complete consolidation plan by end of FY2008 for engineering environmental test facilities from LLNL, LANL, and SNL to Pantex</p>		<p>Pu and hydro test plans ensure right experiments are being done. Plans eliminate unnecessary tests</p> <p>Full resources of LLNL nuclear operations more readily available to DAF through standard approach</p> <p>Reduced time to FPU with consolidated engineering test facility at Pantex</p>	
<p>Defense Nuclear Nonproliferation</p> <p>Support nuclear nonproliferation in developing a Complex-like 2030 vision</p>	<p>Establish coordination committee to share experiences</p> <p>Develop strategy with NNSA, LANL, and SNL to move to new U.S.-Russian partnership model for joint nuclear nonproliferation program, weapons verification, and emergency response</p> <p>Apply nuclear material detection technologies and methodologies to meet arms control treaty verification requirement</p> <p>Develop integrated S&T roadmap with LANL, PNNL, and ORNL</p> <p>Establish a coordinated operations support center for 24/7 WMD assistance</p>	Update S&T roadmap	<p>More effective nuclear nonproliferation program</p> <p>Global nuclear materials assurance regime</p> <p>Duplicative efforts avoided and NNSA investments optimized</p> <p>Excellence in emergency response maintained</p>	C.1.b.2
<p>Consolidate Weapons Program Staff</p> <p>Provide NNSA a more integrated weapons program</p>	Co-locate SNL/CA with LLNL to enhance cooperation and integration. Move SNL/CA weapon system groups to the LLNL site and co-locate with our nuclear weapons engineering organization		<p>Greater cooperation and efficiency</p> <p>Reduced SNL/CA footprint allows expansion of WFO</p> <p>Cost reduced</p>	C.3

NWC Communication Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
Security Reduce cost of security through graded risk management	With NNSA's agreement, develop vulnerability assessment process to enhance security in the Complex. Subcontractor GEM Technology with LLNL threat mitigation analysis group will provide expertise	Apply approved vulnerability assessment processes	Maximized protection, minimized costs, and optimized safety and security interface	D.1
Supply Chain Management Support NNSA's strategic sourcing and centralized purchasing activities to advance KCP's sourcing efforts for the Complex	Enhance supply chain initiatives and SCMC at Kansas City by providing data, resources, and systems	Ongoing	KCP's spend-to-reduce costs leveraged throughout Complex	E.3
Workforce Management Continually realign workforce over the life of the contract to reflect efficiency gains, changes in mission, funding profile, WFO growth	Identify current and future workforce requirements for the Complex. Provide to preselected universities to allow development of curricula and training tailored to NNSA needs	Expand efforts to combine recruiting	More diverse pool of graduates from which to recruit for all NWC sites Graduates offered a multisite career path with rotational assignments through joint recruiting	E.1
Joint Efforts Undertaken by LANL and LLNL				
EVMS Implement EVMS in coordination with LANL	Jointly define a template for a graded approach to EVMS	Apply EVMS to joint LLNL/LANL projects	Systematic method of tracking performance. Consistent application of EVMS at LLNL and LANL	C.1.a
Roadmaps Improve tactical and strategic planning	Develop national/global security, LDRD, and nuclear nonproliferation roadmaps jointly with LANL	Update roadmaps	Duplicative efforts avoided and NNSA investments optimized	C.1.b.8 C.1.b.6 C.1.b.2
Peer Review Improve peer review processes	Share DRC members with LANL	Continue annual peer reviews/rotate members	Improved, more efficient peer-to-peer review of S&T	C.1.a
Weapons Program Identify where surety collaborations can be increased for cost-effective surveillance program	Identify with LANL novel surety collaborations and technologies for RRW and to address DBT		Security costs contained Surety capabilities expanded	C.1.b.1

NWC Communication Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
Boost verification by end of FY2013	Jointly with LANL, identify process changes and software development needed to deliver surveillance information more quickly to engineers for evaluation by end of FY2008		Closure of SFIs in a more timely fashion One of three significant weapons physics challenges resolved by FY2013	C.1.b.1 C.1.b.1
Business Systems Achieve process improvements and cost reductions for business systems	Partner with LANS on business system development Consolidate payroll, accounts payable, and travel expense processing	Use common purchase cards, travel cards, and travel service providers	Reduced costs from consolidation of routine transactional operations and use of COTS	E.2
Purchasing Reduce cost of support services	Collaborate for procurement and common services unique to the two laboratories	Continued collaboration	Cost of large procurements reduced	E.3
IRM systems Improve IRM to support missions requirements	Coordinate IRM systems. Chief Information Advisor for both laboratories promotes best practices and common solutions	Continued coordination of policies and best practices	Multisite consistency and interoperability of IRM systems Longer-term costs reduced	E.4
Security Implement approaches that enhance safety	Restructure protective force operations: <ul style="list-style-type: none"> ▪ Determine viability of a single subcontractor to manage protective force at LLNL/LANL ▪ Combine protective forces at LLNL and SNL/CA Coordinate security programs by common Chief Security Officer (CSO) to focus on initiatives for long-term security effectiveness		Improved consistency of operations and cost efficiency Integration and consistency in two-laboratory approach	D.1
ES&H Implement a zero accidents philosophy	ISMS verification under new contract Begin VPP and ISO 14001 certification steps	Adopt/implement a common safety basic training curriculum for the two laboratories	Cost savings with joint training program development Consistency across laboratories	D.2

H.2.4 CONTRIBUTION TO OVERALL NWC PERFORMANCE IMPROVEMENTS

We commit to achieving the NNSA Complex 2030 vision as expeditiously as possible. Figure H-17 highlights key initiatives that have the potential for major impact on overall Complex performance.

FIGURE H-17. CONTRIBUTIONS TO OVERALL NWC PERFORMANCE IMPROVEMENTS

Contribution to NWC Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
<p>Performance Fee</p> <p>Greatly enhance communication, cooperation, and integration across the NWC to accelerate achievement of Complex 2030 vision</p>	<p>Drive enhanced multisite integration with an incentive fee. Dedicate 10% of fee pools at each site. Our parent organizations have agreed to support this approach</p>	<p>Accelerate achievement of Complex 2030 vision with continued multisite incentive fee</p>	<p>Major multisite integration initiatives for Complex 2030 will receive high priority attention and support from all parent organizations</p>	<p>C.3</p>
<p>Accelerate Predictive Capability</p> <p>Deliver sustained 1+ PF weapons simulation system capability by FY2013</p> <p>Resolve three significant weapon physics challenges</p>	<p>Deploy petaflop-scale platform</p>	<p>Consolidate to one weapon simulation system by the end of FY2009. Extension to LANL and SNL will provide additional cost efficiencies</p>	<p>Improved predictive capability, which will simulate the performance, safety, and surety of the stockpile with quantified uncertainties</p>	<p>C.1.b.1</p>
<p>Facility and Material Consolidation</p> <p>Develop portable diagnostics to support facility-free hydro testing and pulse-power experiments at NTS</p> <p>Close Site 300 firing facilities by FY2010</p> <p>Close DARHT by FY2013</p> <p>Develop joint plans for experiments across LANL and LLNL</p> <p>Consolidate B332 Category I and II SNM and package for shipping by end of FY2011</p>	<p>Develop plan for consolidating engineering environmental test facilities from LLNL, LANL, and SNL to Pantex</p> <p>Develop user-facility model – nonentitlement approach to user facilities</p> <p>Develop integrated prioritized Pu and hydro test plans with LANL</p>	<p>Implement plans approved by NNSA</p>	<p>Major cost savings and cost avoidances with facility consolidations, use of new technologies, and decrease in experimentation required</p> <p>Properly structured model that prioritizes performance, reflects NNSA national priorities</p> <p>Assurance that the right experiments are being done, eliminating unnecessary and redundant tests, thereby reducing costs</p> <p>Removal of nuclear material will dramatically reduce cost of operations</p>	<p>C.1.b.1</p>

Contribution to NWC Objectives	Planned Efforts		Expected Accomplishments	Vol. II Ref.
	FY2008	FY2009		
<p>Transform to an RRW Stockpile by FY2030 Achieve a FPU within 3 years after authorization</p>	Develop proposal for final design, prototype production of RRW by LLNL/LANL team	Demonstrate prototype RRW pit by FY2009 With NNSA approval, initiate efforts on RRW development program	Demo of RRW pit for developing requirements for CMRR and reducing risk to FPU schedule	C.1.b.1
<p>NIF – National Ignition Facility Achieve ignition with NIF and transition to full user facility operation before FY2012 Conduct experiments that will validate three major weapons physics challenge resolutions</p>	Begin development of NIF national users operations plan	Complete NIF project on time and on budget Conduct first non-ignition weapon physics experiments	Beginning of NIF mission with experiments for stockpile stewardship and basic science Key role in validating solutions to significant physics challenges	C.1.b.1
<p>Support NNSA's Strategic Sourcing and Centralized Purchasing activities Support NNSA's strategic sourcing and centralized purchasing activities</p>	<p>Enhance NNSA's supply chain initiative and SCMC at Kansas City. Provide data, resources, systems to support KCP:</p> <ul style="list-style-type: none"> ▪ Use enhanced spend analytics capabilities to support SCMC ▪ Enhance in situ Ariba system at LLNL to support SCMC ▪ Provide resources, funds, and catalogs to upload eStore ▪ Conduct bid events through eSourcing ▪ Support ICPT agreement ▪ Share Bechtel's lessons learned with SCMC 	Ongoing	Leveraged KCP procurements for reduced costs throughout Complex	E.3
<p>Security Reduce cost of security through graded risk management</p>	Develop vulnerability assessment processes to enhance approach in the Complex	Apply approved vulnerability assessment processes	Standardization and integration to maximize performance and reduce costs	D.1