Part III - List of Documents, Exhibits, And Other Attachments

Section J

Appendix E

Performance Evaluation and Fee Agreement

Contract Number: DE-AC06-76RL01830
Modification M378

APPENDIX E

STANDARDS OF PERFORMANCE-BASED FEE

FY 2003

BATTELLE PERFORMANCE EVALUATION AND FEE AGREEMENT

for

Management and Operations of the

Pacific Northwest National Laboratory

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January 28, 2003
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January 29, 2003
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INTRODUCTION

This document describes the basis for the evaluation of Battelle's (hereafter referred to as "the Contractor") performance regarding the management and operations of the Pacific Northwest National Laboratory (hereafter referred to as "the Laboratory") for the evaluation period from October 1, 2002, through September 30, 2003. The performance evaluation provides a standard by which to determine whether the Contractor is managerially and operationally in control of the Laboratory and is meeting the requirements of the Department as stipulated within this contract.

This document also describes the distribution of the total available performance-based fee and the methodology for determining the amount of fee earned by the Contractor as stipulated within the clauses entitled, "Determining Total Available Performance Fee and Fee Earned," "Conditional Payment of Fee, Profit, or Incentives," and "Total Available Fee: Base Fee and Performance Fee Amount." In partnership with the Contractor and other key customers, the Department of Energy (DOE) Headquarters (HQ) and the Richland Operations Office (RL) have defined the performance expectations that serve as the Contractor's performance-based evaluation and fee determination.

In a July 13, 1998 memorandum, the Director of the DOE Office of Science (SC) identified high-level expectations in six critical areas that SC would use to guide its regular assessment of laboratory performance. These critical areas are Science, Leadership, ES&H, Infrastructure, Business Operations and Stakeholder Relations. The memorandum also noted that SC expects SC/HQ program managers, field offices, and laboratories to work in partnership to develop laboratory-specific outcomes, objectives, and performance indicators, which support these high-level expectations and to use self-assessment as a tool to confirm desired outcomes and achieve continual improvement. This performance agreement meets these expectations.

The critical outcomes discussed herein were developed using the SC guidance and site-specific needs for improvement at the Laboratory. The Science and Technological Excellence Critical Outcome addresses performance of outstanding science and leading edge technologies critical to DOE's missions and the nation. This performance plays out in four key areas: the quality of science and technology; the relevance of the programs to DOE missions and national needs; the design, construction and operation of world-class research facilities (as applicable) that are the distinctive signature of the Laboratory; and the effectiveness/ efficiency of research program management. In addition, the Scientific & Technological Excellence Critical Outcome addresses the creation of leading edge scientific capabilities to support evolving DOE mission needs and the operation of EMSL as an effective DOE user facility.

The operational areas of environment, safety, and health (ES&H), safeguards and security, business management, and optimization of the Laboratory's facilities and infrastructure, have been captured within a critical outcome entitled "Management and Operations Excellence." The activities necessary to attract, develop and retain staff critical to operating a world-class laboratory, the relevance of the Laboratory to the needs of the region, and the Laboratory's science and engineering education programs are captured within the Leadership Excellence Critical Outcome.

For FY2003 the overall performance against this performance plan will be utilized to determine the amount of the total available fee earned by the Contractor as stipulated within the contract clause "Total Available Fee: Base Fee and Performance Fee Amount." Battelle may receive a performance-based fee of up to $X.XM (to be determined) based on the overall Contractor performance rating.

Section I provides information on how the overall performance rating for the Contractor, as well as how the performance-based fee earned (if any) will be determined.

Section II provides the detailed information concerning critical outcomes, objectives, performance indicators, and expectations of performance, along with the weightings assigned to each and a table for calculating the final score for each objective and outcome.

Section III describes the commitments for documenting and reporting the Laboratory-Level self-evaluation.

I. DETERMINING THE CONTRACTOR'S PERFORMANCE RATING AND PERFORMANCE-BASED FEE

The overall FY2003 Battelle performance rating will be determined based on the ratings of the Scientific and Technological Excellence, Management and Operations Excellence, and Leadership Excellence Critical Outcomes in accordance with Table A below. The total points derived will be compared to the scale in Table B, below; to determine the overall Contractor adjectival rating for FY2003 and to Table C to determine the amount of performance-based fee earned. Each critical outcome is composed of two or more objectives and each objective has one or more indicators, which are designed to confirm that the Contractor is meeting the objective. The following describes the methodology for determining the Contractor rating:

Performance Evaluation Metrics:
Each of the performance indicators has an associated metric accompanied by a scale that translates the level of performance to an adjectival rating. Unless otherwise specified for a given indicator, the scoring methodology for the assessment process is based upon the adjectival rating definitions and value points identified in Figure I-1.

Adjective	Value Point	Definition
Outstanding	4	Significantly exceeds the standards of performance, achieves noteworthy results, accomplishes very difficult tasks in a timely manner.
Excellent	3	Exceeds expectations and standards of performance, accomplished difficult tasks in a timely manner, and minor deficiencies are more than offset by better performance in other areas.
Good	2	Meets expectations and standards of performance, actions are carried out in an efficient and timely manner; deficiencies do not affect overall performance.
Marginal	1	Below the standards of performance, deficiencies cause serious delays and rescheduling, schedules are adversely affected.
Unsatisfactory	0	Well below standards of performance, deficiencies cause serious delays and re-scheduling, corrective action requires high-level management attention.

Figure I-1. Adjectival Rating Definitions and Value Points

Calculating the Overall Contractor Adjectival Rating:
The adjectival rating earned for each performance indicator is assigned the earned value points per Figure I-1 above. The objective rating is then computed by multiplying the value points by the weight of each performance indicator within an objective. These values are then added together to develop an overall score for each objective. The score for each objective within an outcome is computed in the same manner and is used to develop a score for each outcome. A set of tables is provided at the end of each critical outcome section of this document to assist in the calculation of indicator scores to objective scores to the outcome score. Utilizing Table A, below, the scores for each of the outcomes are then multiplied by the weight assigned and these are summed to provide an overall score for the Contractor. The total Contractor score is compared to the adjectival rating scale found in Table B, below, to determine the overall Contractor adjectival rating for FY2003.

An adjectival rating may be identified at any level of the performance evaluation process (outcome, objective, or indicator). However, the raw score (rounded to the nearest hundredth) from each calculation shall be carried through to the next stage of the calculation process. The raw score will be rounded to the nearest tenth of a point for purposes of identifying the Laboratory's overall adjectival rating as indicated in Table B and for fee determination as indicated in Table C. A standard rounding convention of x.44 and less rounds down to the nearest tenth (here, x.4), while x.45 and greater rounds up to the nearest tenth (here, x.50).

Determining the Amount of Performance-Based Fee Earned:
The total performance-based fee earned is determined based on the overall Contractor weighted score for FY2003 as indicated within Table A and then compared to Table C.

Critical Outcome	Value Points	Adjectival Rating	Weight	Weighted Score	Total Score
Scientific and Technological Excellence			60%		
Management and Operations Excellence			25%		
Leadership Excellence			15%		
				Total Score	

Table A. FY2003 Contractor Evaluation Score Calculation

Total Score	4.0 - 3.5	3.4 - 2.5	2.4 - 1.5	1.4 – 0.5	<0.5
Final Rating	Outstanding	Excellent	Good	Marginal	Unsatisfactory

Table B. FY2003 Contractor Adjectival Rating Scale

Adjectival Rating	Overall Weighted Score from Table A.	Percent of Fee Earned of $ X,000,000.00 (TBD)
Outstanding	3.5 or above	100%
Excellent	3.2 – 3.4	95%
	2.9 – 3.1	90%
	2.5 – 2.8	85%
Good	1.5 – 2.4	50%
Marginal or below	1.4 or below	0%

Table C. Performance-Based Fee Earned Scale

Adjustment to the Adjectival Rating and Performance-Based Fee Determination:
Not including a performance indicator in this agreement or a self-assessment plan does not diminish the need to comply with minimum contractual requirements. Although the performance-based critical outcomes and their corresponding objectives/indicators shall be the primary means utilized in determining the Contractor's performance rating and amount of performance-based fee earned, the Head of Contracting Authority may adjust the rating and/or reduce or increase the otherwise earned fee based on the Contractor's performance against all contract requirements as set forth in clause entitled "Conditional Payment of Fee, Profit, or Incentives." In order for the Contractor to receive all otherwise earned fee, the Contractor must meet the minimum performance requirements as set forth in clause titled "Conditional Payment of Fee, Profit, or Incentives."

Adjustments to the adjectival rating or performance-based fee determination, or both, if necessary, will be based upon the review of the Contractor's self-evaluation report, performance against contract requirements, and results from any of the following activities:

1. Operational awareness (daily oversight) activities performed throughout the year;
2. For Cause reviews;
3. Other outside agency reviews (OIG, GAO, DCAA, etc.) conducted throughout the year, and
4. Annual 2-week review (if needed).

In FY2002, BMI's fee was reduced by $350K as the result of financial control issues related to work authorization and included control point overruns. In FY2003, DOE fully intends to reduce available fee to a significantly greater extent if control point overruns occur (i.e., the sum of actual costs and commitments exceed available funding in the control point).

The final Contractor performance-based rating and fee earned determination will be contained within a year-end report, documenting the results from the DOE review. The report will identify areas where performance improvement is necessary and, if required, provide the basis for any performance-based rating and/or fee adjustments made from the otherwise earned rating/fee based on critical outcome achievements.

II. CRITICAL OUTCOMES, OBJECTIVES & PERFORMANCE INDICATORS

Background

In order for both the short and long-term ability of the Laboratory to meet DOE mission needs and to provide high-value products and services to the DOE and other customers, the DOE-HQ and the PNNL Site Office, in partnership with the Contractor, evaluated DOE and other customer needs and current operating environments to develop the Laboratory's three critical outcomes. While they are validated annually the critical outcomes typically have a 3-5 year time horizon.

The outcome-oriented approach focuses the evaluation of the Contractor's performance against these critical outcomes. Progress against these outcomes is measured through the use of a set of performance indicators, both objective and subjective, that focus primarily on end-results or impact and not on processes or activities. On occasion however, it is necessary to include a process-oriented measure into the suite of performance indicators when the Laboratory is developing a system or process that does not currently exist but will be of significant importance to the DOE and the Laboratory when completed. In this case, it is anticipated that the process indicator will result in outcomes that will be tracked in the following year(s).

Change Control

While the outcomes, objectives, and indicators described herein represent the current set for the Contractor they may require adjustments as prevailing scientific, and/or economic factors change. When this happens, the objectives and the resulting performance indicators will be revised to move the Laboratory in a direction consistent with the expectations of its customers. To this end the content of this document will be managed via formal change control. Changes to the FY2003 Performance Evaluation and Fee Agreement will be documented in accordance with approved procedures utilizing the Change Control Tracking Sheet. The sheet is self-explanatory and requires the concurrence of both the PNNL Site Office and the Contractor Critical Outcome Owners as well as a documented description of the proposed modification and a documented rationale for the modification to include what effects (if any) the change may have on the ability for the Contractor to earn performance-based fee. A change to the critical outcomes also requires the review/approval of the RL Manager and HQ Office of Science (SC). In addition, the RL Manager and SC will be notified of changes to any objectives.

Once the Critical Outcome Owners have concurred with the modification, DOE staff shall forward the form with the prescribed attachments to the Contract Administration Manager, at mail stop K8-50. Contractor staff shall forward the change control form, with attachments, to the PNNL Performance Measurement Process Administrator, at mail stop K1-33. They shall confirm that all required information has been provided and that both Critical Outcome Owners (DOE and Contractor) and, as required, HQ Office of Science have concurred in the change. The change will then be given a formal Change Control number and final PNNL Site Office, RL and Contractor approvals will be obtained, as necessary, to include Contracting Officer approval. Once approved appropriate modifications to this appendix will be prepared and issued via a contract modification.

The above process is the preferred method for incorporating changes to this document, however, if the Parties cannot reach agreement on the changes to critical outcomes, objectives, performance indicators, and/or expected levels of performance, the Contracting Officer shall have the unilateral right to change the performance agreement in accordance with clause entitled "Standards of Contractor Performance Evaluation" within this contract.

Critical Outcomes, Objectives, and Performance Indicators

The following sections describe the critical outcomes, their supporting objectives, and associated performance indicators for FY2003. A list of the Battelle and DOE points-of-contact for each outcome, objective and performance indicator, shall be developed and maintained by both parties and shall be distributed to all points-of-contact and others as appropriate.

1.0 SCIENTIFIC AND TECHNOLOGICAL EXCELLENCE (60%)

Battelle conducts high-quality, leading-edge, scientific research and development programs and develops scientific capabilities that support critical mission needs.

The weight of this outcome is 60%.

The Scientific and Technological Excellence critical outcome shall measure the overall effectiveness/ performance in delivering science and technology as viewed by the DOE HQ Office of Science's (SC), and other cognizant HQ Program Offices as identified below. The contribution to the overall rating from each of the HQ Program Offices has been weighted as follows.

- Office of Science (SC) (30%)
- Assistant Secretary for Environmental Management (EM) (20%)
- Office of Defense Nuclear Nonproliferation (NA-20) (20%)
- Office of Intelligence (IN) (5%)
- Office of Counterintelligence (CN) (5%)
- Assistant Secretary for Energy Efficiency and Renewable Energy (EE) (10%)
- Assistant Secretary for Fossil Energy (FE) (10%)

The overall performance rating for this outcome will be determined by multiplying the overall value points assigned by each of the seven offices identified above by the weightings identified for each and then summing them (see Table 1.1 at the end of this section). If the HQ office provides an adjectival rating for overall performance, the value point scale outlined in Figure I-1 shall apply. The summed value points earned are then compared to Table 1.6 to determine the adjectival rating for Objectives 1.1 through 1.4.

The combined weight of Objectives 1.1 through 1.4 is 80% of this critical outcome.

Each of the HQ Program Office evaluations shall include/address the following objectives, as applicable:

1.1 Quality of Science & Technology

Reviewers will evaluate the overall quality of the research performed. Depending on the nature of the program, reviewers will consider the following.

Science: Success in producing original, creative scientific output that advances fundamental science and opens important new areas of inquiry; success in achieving sustained progress and impact on the field; and recognition from the scientific community, including awards, peer-reviewed publications, citations, and invited talks.

Technology: Whether there is a solid technical base for the work; the intrinsic technical innovativeness of the research; the importance of contributions made to the scientific and engineering knowledge base underpinning the technology program; and recognition from the technical community.

1.2 Relevance to DOE Missions and National Needs

Reviewers will consider whether the research fits within and advances the missions of DOE; contributions to U.S. leadership in international scientific and technical communities; contributions to the goals and objectives of the strategic plans of DOE and other national programs; and the extent of productive interaction with other science and technology programs. Depending on the nature of the program, reviewers will consider the following.

Science: The program's track record of success in making scientific discoveries of technological importance to DOE missions and U.S. industry; the degree of industrial interest in follow-on development of current research results; and the effective use of national research facilities that serve the needs of a wide variety of scientific users from industry, academia, and government laboratories.

Technology: The value of successfully developing pre-commercial technology, to DOE, other federal agencies, and the national economy; the extent to which expected benefits justify the program's risks and costs; and, where appropriate, the degree of industrial interest, participation, and support.

1.3 Success in Constructing and Operating Research Facilities

Reviewers will consider whether the construction and commissioning of new facilities is on time and within budget; whether performance specifications and objectives are achieved; the safe, reliable, and environmentally responsible operation of facilities; adherence to planned schedules; and the cost-effectiveness of maintenance and facility improvements.

Reviewers of user facilities will also consider whether the user access program is effective, efficient, and user-friendly; the quality of the proposal evaluation process; the strength and diversity of user participation; the productivity of the research supported, both in science and technology; and the level of satisfaction among user groups.

1.4 Effectiveness and Efficiency of Research Program Management

Reviewers will consider the quality of research plans; whether technical risks are adequately considered; whether use of personnel, facilities, and equipment is optimized; success in meeting budget projections and milestones; the effectiveness of decision-making in managing and redirecting projects; success in identifying and in avoiding or overcoming technical problems; the effectiveness with which technical results are communicated to maximize the value of the research results and to gain appropriate recognition for DOE and the Laboratory; effectiveness in technical know-how associated with research discoveries; and the degree to which customer and stakeholder expectations are consistently met.

1.5 Create Leading-Edge Scientific Capabilities to Support Evolving DOE Mission Needs

The weight of this objective is 10%.

1.5.1 Progress against Biomolecular Systems Initiative expected outcomes

The weight of this indicator is 50%.

Description: This indicator measures progress against the expected outcomes listed in the FY2003 Biomolecular Systems Initiative (BSI) project plan, revised December 2002.

Assumptions: Performance against this indicator is dependent upon authorized funding for FY2003.

Definitions: Initiative leadership may include the Contractor Level 1 Steward for the initiative, the overall initiative leader, the leader of the initiative's technical program, and possibly a deputy leader.

Performance Evaluation: Initiative leadership will involve the DOE PNNL Site Office (PNSO) point of contact in the progress reviews normally scheduled for the initiative. If the DOE-PNSO point-of-contact determines that the normal reviews are insufficient, the DOE-PNSO and the Contractor may choose to form a review group, which will include representatives of the Contractor, DOE-PNSO, and possibly the HQ Office of Science. Using input from the reviews, DOE-PNSO and Contractor staff will prepare a short written report on progress against the previously established indicators. The adjectival rating will be established by DOE-PNSO for this indicator using the evaluation scheme identified within Section I of Appendix E.

Initiative performance will be evaluated using an assessment process that will result in a numerical performance rating based on the following metrics. During FY2003, progress will be measured in five areas:

- Recruiting
- Program development and scientific partnerships
- Technical Achievements
- Strengthen scientific reputation
- Peer Review

It is important to note one other Indicator within this Performance Evaluation and Fee Agreement identifies outcomes specific to the Biomolecular Systems Initiative. The 2.2.2.1 sub-indicator addresses facility and operations outcomes needed to achieve the 2010 Vision of the Laboratory for Systems Biology – objectives germane to the BSI. Each BSI indicator whether in 1.5.1 or 2.2.2.1, is clearly distinguishable; one does not resemble the other. For instance, the 2.2.2.1 indicator identifies outcomes for the Pilot Proteomics Facility, scope currently supported by GTL funds. The 1.5.1.3 technical achievement indicator relates to specific LDRD project outcomes, which are critical capability development measures. Each indicator will be counted only once and the Initiative director will provide the DOE-PNSO POC a break out of how each item is tallied.

1.5.1.1 Recruiting

The weight of this sub-indicator is 20%

Description: The initiative continues to recruit senior scientists (level 4-6) specifically focused on systems biology. We will seek to fill one senior imaging biologist position and one mid to entry-level analytical or cell biologist position. BSI will work with the Computational Sciences and Engineering Initiative (CS&EI) leadership to recruit a senior computer scientist with expertise in data modeling and architecture in a multi-disciplinary environment. BSI will also work with CS&EI to recruit a mid to entry-level computational biologist. These BSI/CS&EI new hires will be shared appointments. Offers are to be extended by September 2003. Ratings are defined as follows.

Performance Evaluation:

Outstanding: Targeted offers for new hires are met for:
- One senior imaging biologist
- One mid to entry-level cell or analytical biologist
- One senior computer scientist
- One mid to entry-level computational biologist.

Excellent: Targeted new hire offers are met with minor changes in the new hire mix.

Good: Offers extended to one mid-level biologist, either imaging, analytical or cell, and to one mid-level computer scientist, either in data architecture or computational biology, in spite of significant recruiting efforts that may include posting ads, attending job fairs associated with national scientific society meetings, inviting interview candidates for seminars and site visits, following an internal process for screening and evaluating candidates, and utilizing an internal professional recruiter.

Marginal: No offers extended and some recruiting efforts completed that included some advertising, potential candidates invited to seminars but none identified as recruits, at least three interviews conducted, and some candidate screening and evaluating completed.

Unsatisfactory: No offers extended, minimal to no recruiting completed with no ads placed, one or no recruits interviewed, and no evaluation or screening process in place.

1.5.1.2 Program development and scientific partnerships

The weight of this sub-indicator is 20%

Description: The initiative continues to build the research business base with focus on DOE Office of Biological and Environmental Research (OBER) and National Institutes of Health (NIH). While congressional appropriation decisions for FY2003 may result in limited Calls for Proposals this fiscal year; we anticipate a greater number of requests for proposals from NIH and fewer from DOE this year. Though the targeted value of proposals listed below may not materialize; every appropriate proposal opportunity will be met.

In building our research base, the initiative will continue to strengthen existing institutional relationships with Oregon Health and Science University (OHSU) and the Massachusetts Institute of Technology. These collaborations will yield results for the biological sciences and secure constituencies to build a well-funded national program.

Performance Evaluation:

Outstanding: High quality proposals submitted to DOE and NIH for upcoming calls with a focus on proteomics, cellular imaging, computational biology and visualization, and microbial research. Targeted value of multi-year proposals is $60M.

Demonstrate progress in building a national resource for biodefense in collaboration with OHSU. Submit a minimum of two major NIH proposals jointly with OHSU or other university partners including a joint Regional Center of Excellence in Biodefense Research proposal. Establish a joint project with the MIT Department of Mechanical Engineering and Biological Engineering to demonstrate data mining capability that couples theoretical and experimental studies of complex cellular systems.

Excellent: High quality proposals submitted to DOE and NIH, in addition to other funding sources, for multi-year programs totaling $50M.

Work with OHSU to identify collaboration efforts directed toward future proposals that build on mutual strengths such as bio-informatics and studies to determine the proteome of select agents of bioterrorism and novel detection approaches. Submit a minimum of one multi-disciplinary proposal in collaboration with OHSU. Partner with MIT to identify further collaboration efforts and potential demonstration projects that are directed toward future proposals in bioinformatics; submit at least one joint MIT proposal

Good: High quality proposals submitted to DOE and NIH, in addition to other funding sources, for multi-year programs totaling $35M.

OHSU scientific collaborations clearly defined with specific investigators at the R01 level, but commitments and follow-up activities to pursue joint proposals are restricted to small portions of specific projects. The MIT partnership is strengthened through current project collaborations; however, fewer new areas are explored.

Marginal: Minimal multi-year proposal activity of $20M.
Minimal progress in working with OHSU and MIT, some dialogue is maintained.

Unsatisfactory: Proposal activity less than $20M.
Little or no progress in working with OHSU and MIT

Note: Within these guidelines, points earned will be prorated on the basis of the degree to which the goals are achieved (i.e., points will be assigned proportionally to the targeted proposal values).

1.5.1.3 Technical achievements

The weight of this sub-indicator is 20%

Description: The Laboratory's strategic success in achieving a leadership position in Systems Biology is based on developing a high level of science capability to establish a national resource. Key development areas include, but are not limited to: identification and characterization of the molecular machines of life; characterization the functional repertoire of complex microbial communities; computational methods and capabilities to understand complex biological systems and predict behavior; cell response to oxidative damage and low-dose radiation; and technology-driven fundamental projects to determine how organisms respond to stress, evolve and change in the environment.

Performance Evaluation: Though research projects often do not proceed as planned and progress is dependent on a myriad of conditions and resources (feasibility of approach, availability of equipment, staffing, etc.), we have identified key LDRD projects with milestones that are important indicators of success and which we will strive to complete within the projected due dates:

- Cytomegalovirus (CMV) Proteomics Project – A comprehensive proteome comparison of five CMV strain variants, whose genomes are currently being sequenced. Significant proteomic data (greater than 50% of predicted open reading frames) on all five strains is obtained (July 2003). Camp and Smith, Principal Investigators.
- Protein-Protein Complexes Project – Feasibility studies demonstrating ability of scFv antibodies for affinity purification of proteins from organisms outside the scope of the current GTL. Identification of the major constituents in at least one protein complex using mass spectrometry will be accomplished (September 2003). Siegel, Principal Investigator.
- Single-Chain Antibody Project – Production of high affinity scFv antibodies. The isolation of antigen specific scFv clones using a variety of selection techniques, including multiplex screens, individual screens, screens accomplished by flow cytometry, magnetic bead, based screens, or a combination of two techniques, will be accomplished (August 2003). Feldhaus, Principal Investigator.

Outstanding: Progress for each milestone will be measured on a percent complete basis, milestones referenced in the approved LDRD proposals. An outstanding rating will be achieved for tasks completed in aggregate of 90% or greater. Percent complete will be calculated on progress and duration (anticipated number of days to completion).

Excellent: Progress toward completion is measured for each milestone with an aggregate percent complete range for the three milestones is 60% to 89% complete. If one or two tasks fail to materialize, more weight will be assigned to the remaining task(s).

Good: Progress toward completion is measured for each milestone with an aggregate percent complete range for the three milestones is 40% to 59% complete. If one or two tasks fail to materialize, more weight will be assigned to the remaining task(s).

Marginal: Progress toward completion is measured for each milestone with an aggregate percent complete range for the three milestones is 20% to 39% complete. If one or two tasks fail to materialize, more weight will be assigned to the remaining task(s).

Unsatisfactory: Minimal progress is made and milestones are not met.

1.5.1.4 Continued technical and scientific progress

The weight of this sub-indicator is 20%

Description: Articles are to be submitted for publication in top ranked, peer-reviewed journals for molecular biology, bio-physics, cell signaling, proteomics, and microbiology research. As we move from novel approaches and feasibility to demonstration, breakthrough developments which have been achieved the past two years will now begin to provide the basis for papers written and submitted the next few years in systems biology. This year the Initiative will continue to underscore the importance of reporting on research specifically employing systems biology approaches.

Performance Evaluation:

Outstanding:	Fifty or more articles submitted for publication in peer-reviewed journals.
Excellent:	Forty articles submitted for publication in peer-reviewed journals.
Good:	Twenty-five articles submitted for publication in peer-reviewed journals.
Marginal:	Sixteen articles submitted for publication in peer-reviewed journals.
Unsatisfactory:	Less than sixteen articles submitted for publication in peer-reviewed journals.

Note: Within the above guidelines, value points earned will be prorated on the basis of the degree to which the goals are achieved (i.e. value points will be assigned proportionally to the targeted number of publications).

1.5.1.5 Peer review

The weight of this sub-indicator is 20%

Description: The BSI External Advisory/Review Committee provides guidance and feedback on (1) specific focus areas and scientific-technical content, (2) alignment of the BSI to DOE's missions and programs, (3) and collaboration and partnership strengths and direction. The DOE-PNSO point-of-contact is invited to participate in the review meeting to be held in August. A copy of the written evaluation report that is prepared for the Laboratory's Research Council will be submitted to DOE-PNSO. The report provides an assessment of the Initiative's progress against objectives, numerical ratings, and recommendations for future growth and outlook.

Performance Evaluation:

A rating for this sub-indicator will be computed based on the external advisor's feedback and validated by the DOE-PNSO POC utilizing the following rating scale:

Outstanding:	4.0 – 3.5
Excellent:	3.4 – 2.5
Good:	2.4 – 1.5
Marginal:	1.4 – 0.5
Unsatisfactory:	<0.5

1.5.2 Progress against Computational Sciences and Engineering Initiative expected outcomes

The weight of this indicator is 35%.

Description: This indicator measures progress against the expected outcomes listed in the FY2003 Computational Science and Engineering Initiative (CS&EI) Project Plan.

Assumptions: Performance against this indicator is dependent upon authorized funding for FY2003.

Definitions: Initiative leadership may include the Contractor Level 1 Steward for the initiative, the overall initiative leader, the leader of the initiative's technical program, and possibly a deputy leader.

Performance Evaluation: Initiative leadership will involve the PNNL Sight Office (PNSO) POC in the progress reviews normally scheduled for the initiative. If the PNSO POC determines that the normal reviews are insufficient, the PNSO and the Contractor may choose to form a review group, which will include representatives of the Contractor, PNSO, and possibly the HQ Office of Science. Using input from the reviews, PNSO and Contractor staff will prepare a short written report on progress against the previously established indicators. The adjectival rating will be established by DOE-RL for this indicator using the evaluation scheme identified within Section I of Appendix E.

It is important to note one other Indicator within this Performance Evaluation and Fee Agreement identifies outcomes pertinent to the Computational Science and Engineering Initiative. The 2.2.2.2 indicator addresses computing resources and facility space needed to achieve the PNNL 2010 Vision for Computational Sciences and Engineering – objectives germane to the CS&EI. Each CS&EI indicator whether in 1.5.2 or 2.2.2.2, is distinguishable in and of itself; one does not resemble the other.

1.5.2.1 Continued technical and scientific progress

The weight of this sub-indicator is 60%

Description: Continued technical and scientific progress will be evaluated using an assessment process that will result in a numerical performance rating based on the metrics discussed in the following list. The following goals will be measured:

FY2003

- In molecular science and nanoscience, extend the Self-Consistent-Charge Density Functional Tight-Binding model to implement atomic forces and couple them to drivers for energy minimization, transition state determination, force constant calculation, and molecular dynamics simulations. This will permit quantum modeling and simulation of systems that are at the heart of biochemical reactivity and nanoscale science. No other approaches are currently able to give a direct theoretical account of quantum mechanical effects in systems of this size. (Gutowski)
- In remote sensing analysis, develop a parallel computer implementation of the prototype Bayesian Regression Tool for hyperspectral sensing data. The Bayesian Regression Tool promises to provide improved measurement estimates from sensing data as well as a more realistic assessment of the estimates true uncertainty. (Heasler)
- In high performance image analysis, complete the Parallel Computational Environment for Imaging Science (PiCEIS) workbench prototype, adding a parallel data input/output feature. This project, in concert with other ISAT initiative efforts, is developing in-core and out-of-core computational methods that will enable the rapid processing and analysis of very large images, for example high-resolution and multi-sensor imagery, and provide a framework for deployment of new image processing algorithms. (Jones)
- In computational engineering, formulate and implement a damage model accounting for fiber/matrix debonding and matrix cracking of short-fiber thermoplastic hybrid composite

structures. This capability is key to the engineered design, manufacturing, and life prediction of thermoplastic composites essential for lightweight automotive materials and high-strength weight-reduction materials for vehicles and wind energy systems. (Khaleel)

- In computer science, design and implement a knowledge discovery and visual data mining tool that can be used to evaluate large numbers of gene expression profiles. This will enable us to isolate the very similar regions in large genomes that may contribute to the functional identification of genes, as well as the very different regions that may reveal the phenotypic changes caused by amplification, deletion, and mutation of nucleotides and genome rearrangement. (Wong)
- In environmental science, develop and demonstrate a parallel implementation of the water-oil-air operational mode for multi-phase fluid flow on a carbon tetrachloride vadose zone Hanford Site problem. Understanding field scale behavior of carbon tetrachloride in vadose zone sediments is a critical need at the Hanford Site, due to the large amount of this chemical that is unaccounted for and its potential health risk. (Yabusaki)

Performance Evaluation:

Outstanding:	Complete five or more of the above goals
Excellent:	Meet four of the above goals
Good:	Meet three of the above goals
Marginal:	Meet two of the above goals
Unsatisfactory:	Meet less than two of the above goals

1.5.2.2 Increase visibility of Computational Science activities at PNNL

The weight of this sub-indicator is 20%

Description: This sub-indicator will measure the ability of the Contractor to increase focus on the Computational Science and Engineering activities within the Laboratory. The PNSO POC will utilize the following metrics in determining the evaluation rating:

- Submit at least 10 new papers related to capability developments for publication in peer-reviewed journals or conferences during FY2003.
- Present at least 5 papers related to capability developments at national or international computing, mathematics or statistics conferences in FY2003.
- Continue the Computational Science and Engineering seminar series and host at least 5 seminars.
- Organize and conduct PNNL's research exhibit at the SC2002 conference and exposition.
- Keep PNNL's Computational Science and Engineering website up-to-date with visible work.

Performance Evaluation: The overall rating for this sub-indicator will be determined by the average of the five review areas (bullets) identified above per the following rating scale. Each review area will be weighted equally.

Outstanding:	4.0 - 3.5
Excellent:	3.4 - 2.5
Good:	2.4 - 1.5
Marginal:	1.4 - 0.5
Unsatisfactory:	<0.5

Note: Each of the five metrics (bullets) listed under this sub-indicator will be assigned a prorated value point rating based on the degree to which the goal is satisfied.

1.5.2.3 Peer review

The weight of this sub-indicator is 20%

Description: The CS&EI Advisory Committee provides guidance and feedback on (1) specific focus areas and scientific-technical content, (2) business strategy and execution. The PNSO POC is invited to participate in the Advisor's meeting and review to be held in August. A copy of the written evaluation report that is prepared for the Laboratory's Research Council will be submitted to the PNSO POC. The report provides an assessment of the Initiative's progress against objectives, numerical ratings, and recommendations for future growth and outlook.

Performance Evaluation: A rating for this sub-indicator will be computed based on the external advisor's feedback and validated by the PNSO POC utilizing the following rating scale:

Outstanding:	4.0 - 3.5
Excellent:	3.4 - 2.5
Good:	2.4 - 1.5
Marginal:	1.4 - 0.5
Unsatisfactory:	<0.5

1.5.3 Progress against the Nanoscience and Nanotechnology Initiative expected outcomes

The weight of this indicator is 15%.

Description: This indicator measures progress against the expected outcomes listed in the FY2002 Nanosciences and Technology Initiative (NSTI) project plan.

Assumptions: Performance against this indicator is dependent upon authorized funding for FY2003.

Definitions: Initiative leadership may include the Contractor Level 1 Steward for the initiative, the overall initiative leader, the leader of the initiative's technical program, and possibly a deputy leader.

Performance Evaluation: Initiative leadership will involve the PNNL Site Office (PNSO) point of contact (POC) in the progress reviews normally scheduled for the initiative. If the PNSO POC determines that the normal reviews are insufficient, the PNSO and the Contractor may choose to form a review group, which will include representatives of the Contractor, PNSO, and possibly the HQ Office of Science. Using input from the reviews, PNSO and Contractor staff will prepare a short written report on progress against the previously established indicators. The adjectival rating will be established by PNSO for this indicator using the evaluation scheme identified within Section I of Appendix E.

1.5.3.1 Increase visibility of Nanoscience and Nanotechnology activities at PNNL

The weight of this sub-indicator is 33%

Description: This sub-indicator will measure the ability of the Contractor to increase focus on the Nanoscience and Nanotechnology Activities within the Laboratory. The PNSO POC will utilize the following metrics in determining the evaluation rating:

- Submit at least eleven new papers for publication in peer-reviewed journals during FY2003 (this represents a minimum of one per NSTI LDRD program).
- Present at least ten technical papers at national or international meetings.
- Continue NSTI seminar series and host at least five seminars with distinguished speakers from each of a) other DOE labs; b) DoD research labs; and c) Tier 1 Universities.
- Overhaul NSTI website & keep up-to-date with current visible work to reflect revised priorities of new leadership.

Performance Evaluation: The overall rating for this sub-indicator will be determined by the average of the four review areas (bullets) identified above per the following rating scale. Each review area will be weighted equally.

Outstanding: 4.0 - 3.5

Excellent: 3.4 - 2.5

Good: 2.4 - 1.5

Marginal: 1.4 - 0.5

Unsatisfactory: <0.5

Note: Each of the four metrics (bullets) listed under this sub-indicator will be assigned a prorated value point rating based on the degree to which the goal is satisfied.

1.5.3.2 Project and program development

The weight of this sub-indicator is 33%

Description: This sub-indicator will measure development of the Nanoscience and Nanotechnology Program and Projects within the Laboratory. The PNSO POC will utilize the following metrics in determining the evaluation rating:

- Prepare at least three proposals in response to FY2003 BES calls for proposals in computational nanoscience and in catalysis.
- Reconvene the outside steering committee set up in FY2002 with at least 60% repeat reviewers to gain a consistent assessment of initiative direction and to provide project development and direction advice.
- Hire at least two new staff contributing to NSTI activities. One senior staff member should be in the new focus area of nanobiology.

Performance Evaluation: The overall rating for this sub-indicator will be determined by the average of the four review areas (bullets) identified above per the following rating scale. Each review area will be weighted equally.

Outstanding: 4.0 - 3.5

Excellent: 3.4 - 2.5

Good: 2.4 - 1.5

Marginal: 1.4 - 0.5

Unsatisfactory: <0.5

Note: Each of the three metrics (bullets) listed under this sub-indicator will be assigned a prorated value point rating based on the degree to which the goal is satisfied.

1.5.3.3 Scientific impact

The weight of this sub-indicator is 34%

Description: The NSTI aims to achieve the following minimum set of scientific advancements in our focus areas of catalysis and detection. The results from the external Peer Review Advisory Committee will also be utilized by the PNSO POC to determine performance against this sub-indicator. The PNSO POC and the Contractor's initiative leadership will agree jointly in advance upon the committee guidelines for rating overall initiative impact.

- Demonstrate a silicate-armored enzyme with stability > 10x that of similar enzymes in solution (measured in terms of the residual catalytic activity) and develop a conductive nanoporous matrix on which to immobilize them.
- Measure modified rates of NO reduction and CO oxidation on metal cluster-decorated MgO nanowires as compared to macroscopic metal surfaces.
- Demonstrate and quantify CO oxidation rate on ternary quantum dot structures grown using molecular beam epitaxy (e.g. Au on TiO_2 quantum dots).
- Characterize the sensing performance characteristics of diverse functionalized nanoparticle films on chemiresistor sensors.

Performance Evaluation: This sub-indicator will be evaluated on the basis of goals achieved and the results of the advisory committee's review and subsequent rating, commencing with the following rating scale:

Outstanding:	Four goals achieved
Excellent:	Three goals achieved
Good:	Two goals achieved
Marginal:	One goal achieved
Unsatisfactory:	No goals achieved

1.6 Improve Scientific Impact of EMSL User Program

The weight of this objective is 10%.

1.6.1 Increase the impact of the EMSL User Program by establishing science grand challenges that engage high visibility user communities.

The weight of this indicator is 50%.

Description: Establish two science grand challenges that cross-cut EMSL capabilities that will be closely aligned with major DOE initiatives and programs. The science grand challenges will be led by internal and external senior scientists who will have the responsibility for managing the grand challenges and building a solid user community in each area.

The following metrics will be used to evaluate this Performance indicator:

- Work closely with OBER, the EMSL User Advisory Committee (UAC), and the PNNL Site Office to develop and issue a plan for development of the scientific grand challenges (Q1 FY2003).
- Work closely with OBER to establish a steering committee of recognized authorities for each grand challenge (Q2 of FY2003).
- The steering committees will organize and conduct one or more facilitated workshops for the purpose of establishing the scope of the science grand challenges (Q3 FY2003). For

FY2003, science grand challenges are anticipated in the areas of biology and sub-surface science.
- Provide scope to SC for their use in preparing a call for the science grand challenges (Q4 FY2003).

Assumptions: Timely OBER approval and budget for each science grand challenge.

Definitions: Timely OBER approval means approval in such a timeframe that the schedule for implementation is not negatively impacted.

Performance Evaluation: Each of the above metrics (bullets) will be assigned a pro-rated value point rating on a scale of 0-4 by the DOE POC based on level of achievement. Where scheduled milestones are identified, 0.2 value points will be deducted for each month schedule slip. Total value points for this Performance Indicator will be the average of all the metrics. Total value points will be transferred to Table 1.2 where weighted averages will be computed and rolled up.

1.6.2 Develop and implement an optimal model for EMSL user facility operations (user program).

The weight of this indicator is 50%.

Description: Develop and implement a "best practices" model for user facility operations based on evaluation of three to six other successful user facilities. After evaluation of the selected facilities, the contractor, in close contact with OBER, the EMSL UAC, and the PNNL Site Office, will identify and implement a model or combination of models that enhances the operation of EMSL as a best-in-class user facility. The following metrics will be used to evaluate this Performance Indicator:

- Hold a workshop and engage the UAC to evaluate user models and best practices and create a draft model for EMSL operations (Q1 FY2003).
- Refine the model, develop an EMSL Facility Operations Manual (EFOM), and issue to OBER for approval (Q3 FY2003).
- Implement the new EMSL facility operations model as outlined in the EFOM (Q4 FY2003).

Assumptions: Timely OBER approval of the EMSL facility operations model.

Definitions: Timely OBER approval means approval in such a timeframe that the schedule for implementation is not negatively impacted.

Performance Evaluation: Each of the above metrics (bullets) will be assigned a pro-rated value point rating on a scale of 0-4 by the DOE POC based on level of achievement. Where scheduled milestones are identified, 0.2 value points will be deducted for each month schedule slip. Total value points for this Performance Indicator will be the average of all the metrics. Total value points will be transferred to Table 1.2 where weighted averages will be computed and rolled up.

HQ Program Office	Adjectival Rating	Value Points	Weight	Weighted Score	Overall Weighted Score
Office of Science			30%		
Assistant Secretary for Environmental Management			20%		
Office of Defense Nuclear Nonproliferation			20%		
Office of Intelligence			5%		
Office of Counterintelligence			5%		
Assistant Secretary for Energy Efficiency and Renewable Energy			10%		
Assistant Secretary for Fossil Energy			10%		
				Overall Program Office Total	

Table 1.1. Objectives 1.1 - 1.4 S&T Excellence Evaluation Score Calculation for Program Offices

ELEMENT	Adjectival Rating	Value Points	Indicator Weight	Total Points	Objective Weight	Total Points
1.0 Scientific and Technological Excellence						
Objectives 1.1 through 1.4: Program Office Total Scores (from Table 1.1)					80%	
1.5 Create leading-edge scientific capabilities to support evolving DOE Mission needs						
1.5.1 Progress against Biomolecular Systems Initiative expected outcomes (roll up from Table 1.3)			50%			
1.5.2 Progress against Computational Sciences and Engineering Initiative expected outcomes (roll up from Table 1.4)			35%			
1.5.3 Progress against the Nanoscience and Nanotechnology Initiative expected outcomes (roll up from Table 1.5)			15%			
			Objective 1.5 Total		10%	
1.6 Improve Scientific Impact of EMSL User Program						
1.6.1 Increase the impact of the EMSL User Program by establishing science grand challenges that engage high visibility user communities.			50%			
1.6.2 Develop and implement an optimal model for EMSL user facility operations (user program).			50%			
			Objective 1.6 Total		10%	
					Critical Outcome 1.0 Total	

Table 1.2. Science and Technological Excellence Critical Outcome Overall Score Calculation

ELEMENT	Adjectival Rating	Value Points	Weight	Weighted Score	Overall Weighted Score
1.5.1 Progress against Biomolecular Systems Initiative expected outcomes					
1.5.1.1 Recruiting			20%		
1.5.1.2 Program development and scientific partnerships			20%		
1.5.1.3 Technical achievements			20%		
1.5.1.4 Continues technical and scientific progress			20%		
1.5.1.5 Peer review			20%		
				Indicator 1.5.1 Total	

Table 1.3. Performance Indicator 1.5.1 Score Calculation

ELEMENT	Adjectival Rating	Value Points	Weight	Weighted Score	Overall Weighted Score
1.5.2 Progress against Computational Sciences and Engineering Initiative expected outcomes					
1.5.2.1 Continued technical and scientific progress			60%		
1.5.2.2 Increase visibility of Computational Science activities at PNNL			20%		
1.5.2.3 Peer review			20%		
				Indicator 1.5.2 Total	

Table 1.4. Performance Indicator 1.5.2 Score Calculation

ELEMENT	Adjectival Rating	Value Points	Weight	Weighted Score	Overall Weighted Score
1.5.3 Progress against the Nanoscience and Nanotechnology expected outsomes					
1.5.3.1 Increase visibility of Nanoscience and Nanotechnology activities at PNNL			33%		
1.5.3.2 Project and program development			33%		
1.5.3.3 Scientific impact			34%		
				Indicator 1.5.3 Total	

Table 1.5. Performance Indicator 1.5.3 Score Calculation

Total Score	4.0 - 3.5	3.4 - 2.5	2.4 - 1.5	1.4 - 0.5	<0.5
Final Rating	Outstanding	Excellent	Good	Marginal	Unsatisfactory

Table 1.6. Scientific and Technological Excellence Critical Outcome Final Rating

2.0 MANAGEMENT AND OPERATIONS EXCELLENCE (25%)

Battelle will manage and operate PNNL with distinction, becoming the DOE benchmark standard for Laboratory management, providing stewardship of DOE's assets, and protecting the health and safety of workers, the public, and the environment.

The weight of this outcome is 25%.

The Management and Operations Excellence Critical Outcome shall measure the overall effectiveness/ performance of a number of aspects of Laboratory operations including ES&H management, operational excellence, facility maintenance, energy efficiency, business management, Safeguards and Security, capability alignment with current and future mission needs, and the development of integrated management systems capable of delivering products and services and complying with applicable requirements as viewed by the PNNL Site Office, and other cognizant RL and/or HQ organizations. Performance objectives and indicators to be utilized in the evaluation of the Management and Operational Excellence Critical Outcome have been developed in partnership with the appropriate DOE HQ, PNNL Site Office, and RL counterparts and are listed below. These performance objectives and indicators identify significant activities/requirements important to the success of the Laboratory's operations as identified by the Department and/or its customers. The reviewers (PNNL Site Office, RL and/or HQ) as a primary means of determining the overall Management and Operations Excellence Critical Outcome performance rating shall utilize these objectives and indicators.

Each of the performance indicators has an associated performance evaluation metric that translates the level of performance to an adjectival rating. Scoring of the individual performance indicators is based on the point scheme identified within Section I of this document. The overall adjectival rating is then computed by multiplying the weight of each performance indicator, and summing them all to develop an overall score for each objective. The score for each objective within the outcome is then computed in the same manner to arrive at an overall score for the outcome (see Table 2.1 at the end of this section). The overall value points earned are then compared to Table 2.8 to determine the overall adjectival rating.

Objectives and Performance Indicators:

2.1 Provide management and operational excellence in achieving key contract performance requirements

The weight of this objective is 50%.

2.1.1 Provide ESH&Q management systems that sustain and enhance excellence in Laboratory operations

The weight of this indicator is 25%.

Description: This indicator is a composite of performance measures designed to provide an overall picture of ESH&Q performance and comprise the safety performance objectives, performance measures, and commitments called for in DEAR 970.5223-1 Integration of Environment, Safety, and Health into Work Planning and Execution (DEC 2000).

Additional descriptions of the measures and targets are provided below the following table.

Performance Measures	Targets
1) Demonstrate excellence in the Safety and Health program - *Total Recordable Case Rate*	Battelle's 3 yr rolling average is ≤ 2.5 cases per 200,000 work hours
2) Demonstrate excellence in the Safety and Health program - *Lost Workday Case Incident Rate (now DART)*	Battelle's 3 yr rolling average is ≤ 1.1 cases per 200,000 work hours
3) Annual Safety and Health evaluation. Deliver an annual self assessment that evaluates the following performance criteria: management commitment; employee involvement; hazard prevention and control; hazard analysis; and safety and health training.	Overall numerical rating of 9-12 - (Based on a scale of 1-12)
4) Conformance of the Environmental Management System to ISO 14001 standard	ISO 14001 registration retained through FY2003
5) Reportable Occurrences of Release to the Environment	≤ 2 events
6) Low Level Radioactive Waste Generation (P2). Reduce amount of waste generated by Lab.	≤ 224 Cubic Meters/yr
7) Hazardous Waste Generation (P2). Reduce amount of waste generated by Lab.	≤ 11.9 MT/yr
8) Spread of Radioactive Contamination	≤ 3 events

1) **Excellence in Safety & Health Program - *Total Recordable Case Rate***
Work-related injury or illness, which resulted in loss of consciousness, restriction of work or motion, transfer to another job, or required medical treatment beyond first aid. Total Recordable Case Rate (TRCR) is the number of total recordable cases per 200,000 hours worked. Source of data: Laboratory SHIMS. This metric is plotted monthly using the most recent 36 months of data.

This target is based on the most recent 3 yrs of data (including subcontractors) compared to the current Bureau of Labor Statistics (BLS) Standard Industrial Classification (SIC) #873 most recent annual average for CY2001, currently 2.5 cases/200,000 hrs.

2) **Excellence in Safety & Health Program - *Lost Workday Case Incident Rate***
Work-related injury or illness, which resulted in days away from work and/or days of restricted work activity. Lost Workday Case Incident Rate, renamed now to Days Away, Restricted or Transferred (DART) is the number of lost workday cases per 200,000 hours worked. Source of data: PNNL SHIMS. This metric is plotted monthly using the most recent 36 months of data.

This target is based on the most recent 3 yrs of data (including subcontractors) compared to the current Bureau of Labor Statistics (BLS) Standard Industrial Classification (SIC) #873 most recent annual average for CY2001, currently 1.1 cases/200,000 hrs.

3) **Annual Safety and Health Evaluation**
To demonstrate excellence in implementation of the Safety and Health (S&H) program, and maintenance of the performance measures cited in item 3 of the above table, an annual evaluation of the S&H program implementation is to be conducted by the Contractor. A rating is established by an evaluation team to document the Contractor's overall performance. The ratings are 9-12 = Good; 5-8 = Adequate; and 0-4 = Improvement Required. The FY2003 target is to achieve a rating of "Good."

4) **Environmental Management System Conformance to ISO 14001**
ISO 14001 defines an internationally best management practice for an environmental management system. Conformance to the standard is validated by 3rd party audits/oversight conducted by an auditing body recognized by the U.S. Registrar Accrediting Body (RAB). Target: ISO registration will be retained through FY2003.

5) **Reportable Occurrences of Release to the Environment**
Releases of radionuclides, hazardous substances, or regulated pollutants that are reportable to federal, state, or local agencies. Source of data is review of occurrence reports. All 2A thru E are considered for significance on a case-by-case basis.

6) **Low Level Waste Generation (P2)**
Low Level Waste (LLW) is waste that contains radioactivity and is not classified as high-level waste, transuranic waste, or spent nuclear fuel, or by-product material. Test specimens of fissionable material that are irradiated for research and development only, and not for the production of power or plutonium, may be classified as LLW, providing the concentration of transuranic is less than 100 nanocuries per gram (nCi/g).

FY2003 target is 224 cubic meters. Currently generated waste (as opposed to legacy waste) is tracked in PNNL's Integrated Waste Tracking System. Responds to DOE memorandum of Nov 12, 1999 *"Pollution Prevention and Energy Efficiency Leadership Goals for Fiscal Year 2000 and Beyond."*

7) **Hazardous Waste Generation (P2)**
Hazardous Waste includes 1) RCRA-hazardous waste, 2) State-only hazardous waste, and 3) TSCA waste.

a) RCRA-Hazardous Waste: Wastes that exhibit any of the characteristics of hazardous waste identified in 40 Code of Federal Regulations (CFR) 261, Subpart C (e.g., ignitable, corrosive, reactive, acutely hazardous, or acutely toxic), or that are listed in 40 CFR 261, Subpart D, "List of Hazardous Waste."
b) State-Only Hazardous Waste: Waste regulated under the Washington Administrative Code (WAC) Dangerous Waste Regulations in WAC 173-303 that is not also RCRA-regulated waste.
c) TSCA Waste: Hazardous chemical wastes, both liquid and solid, containing more than 50 parts per million (ppm) of PCBs or PCBs regulated for disposal.

FY2003 target is 11.9 metric tons. Currently generated waste (as opposed to legacy waste) as tracked in PNNL's Integrated Waste Tracking System. Responds to DOE memorandum of Nov 12, 1999 *"Pollution Prevention and Energy Efficiency Leadership Goals for Fiscal Year 2000 and Beyond."*

8) **Spread of Radioactive Contamination**
Number of instances of uncontrolled unwanted (i.e., non-legacy) spread of radioactive contamination meeting the criteria of DOE M 232.1-1A, ORPS Group 1D are evaluated for applicability.

Performance Evaluation:

Outstanding:	7 or more measures met
Excellent:	6 measures met
Good:	4 - 5 measures met
Marginal:	3 measures met
Unsatisfactory:	2 or less measures met

2.1.2 Performance against Business Management sub-indicators

The weight of this indicator is 25%.

2.1.2.1 Cost Management Trends: Overhead cost as a percent of Laboratory's 1830 fully burdened average charge out rate

The weight of this sub-indicator is 50%.

Description: The percent of the Laboratory's 1830 fully burdened direct average charge out rate that is overhead versus salary and fringe. It is the goal of the Laboratory to optimize the amount of labor cost charged to customers that is driven by overhead costs compared to the cost of direct salary and fringe. By monitoring the 1830 fully burdened direct average charge out with the two components, overhead vs. salary and fringe, management can demonstrate the impact of pricing and rate decisions to customers.

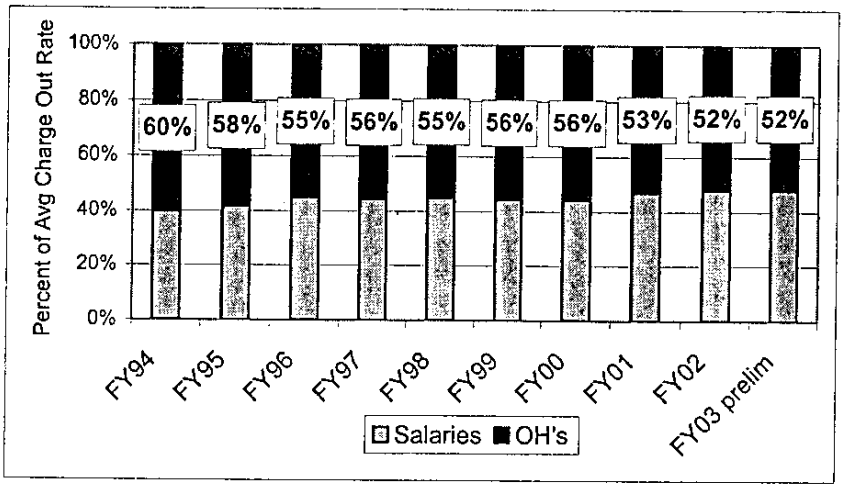


Figure 2.1. Historic Salaries and Overhead Costs as a percent of average charge-out rate.

Definitions:
Overhead: All labor, material and other applicable costs, which cannot be identified as directly benefiting a specific project. Allocated at the company or organizational level.

Salaries: The cost specifically associated with staff compensation including fringe benefits.

Fringe: Cost of allowable benefits paid to staff including taxes, insurance, and paid absences such as vacation, holidays and sick time.

1830 Average Charge-Out Rate: The total burdened labor dollars charged direct to 1830 clients divided by the total number of hours associated with these dollars. The rates include the cost of allowable salaries, benefits, and applied overheads.

Assumptions: The FY2003 preliminary target is based on the Contractor's overall aspiration for this metric coupled with the current FY2003 business projections, which include level funding from EM for safeguards and security activities. Any significant change in programmatic funding will have an impact on our FY2003 estimate.

Performance Evaluation (the target level for each evaluation category has been reduced by 1% point from FY2002):

Outstanding: FY2003 overhead costs are 51% or less of the total 1830 average charge out rate

Excellent: FY2003 overhead costs are greater than 51% but less than or equal to 53% of the total 1830 average charge out rate

Good: FY2003 overheads costs are greater than 53% but less than or equal to 55% of the total 1830 average charge out rate

Marginal: FY2003 overhead costs are greater than 55% but are less than 57% of the total 1830 average charge out rate

Unsatisfactory: FY2003 overhead costs are greater than or equal to 57% of the total 1830 average charge out rate

2.1.2.2 Cost Management Trends: Labor Overhead as a multiplier on the 1830 direct charged operating labor costs

The weight of this sub-indicator is 25%.

Description: For every dollar of directly charged labor cost to a client, an overhead amount is applied. Minimizing the multiplier effect of this overhead is the goal of the Laboratory. This can be achieved by either maximizing the amount of direct charged labor to clients (i.e. grow the business) or by reducing the actual amount of overhead costs incurred; however, it is not desirable to reduce all overhead costs such as Laboratory Directed Research and Development or staff development and training costs.

While the labor multiplier is the measured indicator, our third party multiplier and composite multiplier are effective metrics to track relative to the Laboratory's ability to compare its status with other National Laboratories as well as other non-profit Laboratories. FY2002 values are displayed numerically below.

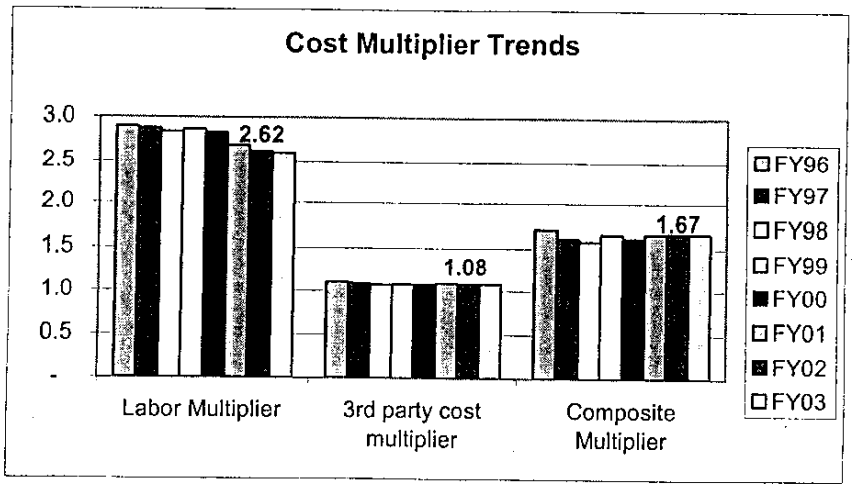


Figure 2.2: Historic multipliers on direct costs.

Definitions:

Overhead: All labor, material and other applicable costs, which cannot be identified as directly benefiting a specific project. Allocated at the company or organizational level.

Direct costs: All labor, material and other applicable costs, which is identified as directly benefiting a specific project. Incurred at the project level.

Multiplier: The total cost divided by the amount of direct costs incurred (that is, less overheads).

Assumptions: The FY2003 preliminary target is based on the Contractor's current FY2003 business projections, which include level funding from EM for safeguards and security activities. Any significant change in programmatic funding and the mix of that funding will have an impact on our FY2003 estimate. Final negotiations around the Contractor's contract terms may also impact this metric.

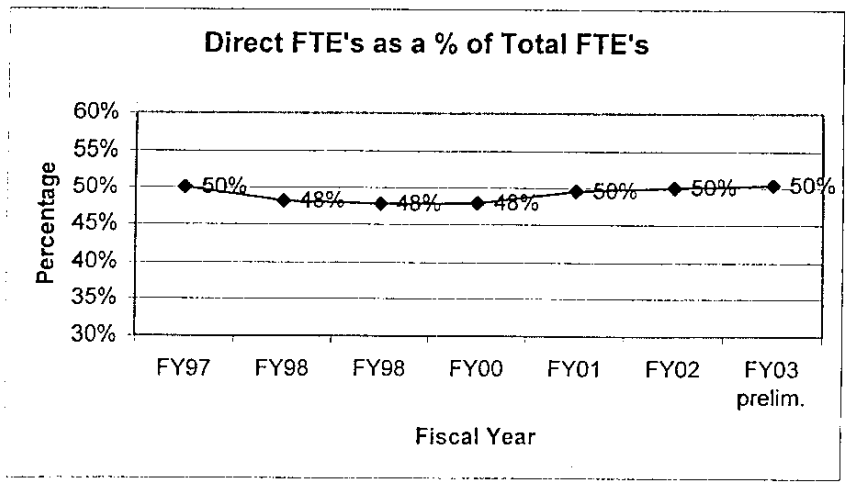
Performance Evaluation:

Outstanding:	FY2003 labor cost multiplier is 2% or more improved over FY2002
Excellent:	FY2003 labor cost multiplier is improved by more than 1% but less than 2%
Good:	FY2003 labor cost multiplier is within 1%
Marginal:	FY2003 labor cost multiplier deteriorates by more than 1% but less than 2%
Unsatisfactory:	FY2003 labor cost multiplier deteriorates by more than 2%

2.1.2.3 Resource Management trends: Direct FTE's as a percent of the total Laboratory FTE's

The weight of this sub-indicator is 25%.

Description: The Contractor's direct FTE's represent the primary indicator of resource deployment to customers. It also represents the primary source of overhead recovery. Monitoring the level of direct FTE's is an institutionalized management practice at the Laboratory. Evaluating direct FTE's relative to the total FTE's available in the Laboratory indicates a measure of the Contractor's resource management.



Data Table	FY97	FY98	FY99	FY00	FY01	FY02	FY03 prelim.
Direct	1,585	1,514	1,511	1,529	1,615	1,671	1,688
Total	3,164	3,139	3,184	3,206	3,261	3333	3,375
% of Total	50%	48%	48%	48%	49%	50%	50%

Figure 2.3. Historic Levels of Full Time Equivalent (FTE) Employees

Definitions:
Full-Time Equivalent (FTE): Total hours charged by all staff during a particular report period divided by the total number of productive hours available during that period (1,832 hours per fiscal year). Provides an indicator of the equivalent number of full time staff.

Direct FTE: Number of Full-Time Equivalent Staff charged to final cost objectives.

Final cost objective: Source of funding provided directly by a client via a contact.

Assumptions: The FY2003 FTE assumptions are based on our aspirations for this target and the current FY2003 business planning projections. Direct FTE's assume direct funding of safeguards and security; funding variability will impact our direct FTE assumptions and the estimated target will need to be renegotiated and incorporated through the approved change control process.

Performance Evaluation: (all evaluation categories have been increased by 1% point over FY2002 targets):

Outstanding: FY2003 direct FTE's are greater than or equal to 51% of the total Laboratory FTE's

Excellent: FY2003 direct FTE's are less than 51% but greater than 50% of the total Laboratory FTE's

Good: FY2003 direct FTE's are less than or equal to 50% but are greater than 49% of the total Laboratory FTE's

Marginal: FY2003 direct FTE's are less than or equal to 49% but are greater than 48% of the total Laboratory FTE's

Unsatisfactory: FY2003 direct FTE's are less than or equal to 48% of the total Laboratory FTE's

2.1.3 Sustain and enhance the effectiveness of Integrated Safeguards and Security

The weight of this indicator is 25%.

Safeguards and Security (SAS) is integrated into the culture of the organization for effective deployment of the management system.

Description: This indicator will assess the degree to which the requirements and practices of the Safeguards and Security management system are integrated into the day-to-day operating culture of the Laboratory. The degree of integration will be determined based on a composite of performance measures designed to provide an overall picture of the effectiveness of Integrated SAS Management. The score shall be derived from the composite average received during the reporting period.

Performance Measures

Demonstrate improvements in Integrated Safeguards and Security Management System processes and functions

Continually assess SAS processes in order to affect appropriate enhancements or actions maintaining effective and efficient operational practices, ensuring long-term stewardship of assets and resources, and playing a key role in supporting the Laboratory's focus on delivering excellent research.

Indicator Description	Specified Level	Cumulative Score
Internal SAS Program Key Components – Key elements of the SAS Program are monitored for process effectiveness and achievement of goals:	Outstanding - Identified goals/key elements are achieved.	3.5 - 4
	Excellent - Majority of identified goals/key elements are achieved	3 - <3.5
	Good - Most goals/key elements achieved; minor issues	2 - < 3
	Marginal - Few goals/key elements achieved; issues identified	1 - <2
	Unsatisfactory - Significant issues; goals not being achieved	0 - <1

Milestone Date – Conduct routine reviews of selected processes and provide results to appropriate management. Data will be reported and collected on a monthly, quarterly and annual basis (as determined through identified key components/elements listing). Targets may be adjusted based on need/circumstances.

Included is the evaluation of performance in Safeguards and Security programmatic areas at protecting assets and compliance/performance as measured by internal and external evaluations and performance against agreed upon corrective action plans.

Key Elements/Components

The following measures are considered key indicators to demonstrate performance management to the desired outcomes for Safeguards and Security. Items may be added or modified based on need.

Description	Target/Goal	Points
Monthly security events at the Laboratory are tracked and categorized by: • Building (location) • Specific types of more significant events • organization • Root cause • Date of occurrence Types of corrective action(s) implemented by line management are tracked. Quarterly	Acceptable range is ≤3 security events per month.	4
	N/A	3
	N/A	2
	>3 ≤5 security events per month.	1
	>5 security events per month	0

The percentage of incidents self-reported shall be monitored and tracked. Those Incidents of Security Concern self-reported by staff members versus the number discovered (IMI 1, 2). Monthly	Maximum of 20% of incidents not self reported	4
	Maximum of 21%-30% of incidents not self reported	3
	Maximum of 31%-40% of incidents not self reported	2
	Maximum of 41%-50% not self reported	1
	>50% not self reported	0
Classification/UCNI - Correct identification of Classified and Unclassified Controlled Nuclear Information (UCNI) -Loss/unaccounted for security interest rates due to inappropriate or lack of proper classification (based on level of severity) Pass/Fail Quarterly Metric	Minimum of 4% of all publications are reviewed by the Classification Office per quarter	4
	Minimum of 3% of all publications are reviewed by the Classification Office per quarter	3
	Minimum of 2% of all publications are reviewed by the Classification Office per quarter	2
	Minimum of 1% of all publications are reviewed by the Classification Office per quarter	1
	No oversight reviews	0
Unclassified Cyber Security. Significant agreed upon metrics shall be monitored and measured to determine the overall effectiveness of the Cyber Security Program. These can include: • Network Security Scan statistics/results • Anti-Virus Tool effectiveness • Employee Awareness • System Vulnerabilities These metrics will be initiated in order to establish a baseline from which to measure the program against in the future. Annual metric	Establish reasonable and effective baseline	4
	N/A	3
	N/A	2
	N/A	1
	Fail to establish a reasonable and effective baseline	0
Employee and Management awareness of their SAS responsibilities. Line management and staff demonstrate their commitment to SAS through completion of required SAS courses. Monthly	95% of the employees are current in their SAS education requirements	4
	85%-94% of the employees are current in their SAS education requirements	3
	75%-84% are current	2
	60%-74% are current	1
	<60% are current	0
Security clearance justifications are maintained – clearances are maintained and processed when necessary. 100% of Selective Reinvestigation Program (SRP) cases are submitted in accordance with the schedule.	100% of SRPs are submitted in accordance with schedules.	4
	95-99% of SRPs are submitted in accordance with schedules.	3
	90-94% of SRPs are submitted in accordance with schedules.	2
	85-89% of SRPs are submitted in accordance with schedules.	1

Monthly	<85% of SRPs are submitted in accordance with schedules.	0
FNVA requests are processed in a timely manner in accordance with requirements. Overall processing time for all FNVA requests shall be completed within 10 days. Other items tracked that impact this metric include: • Indices processed: Lead time provided by requestor • Type of request (involves sensitive; indices; etc) Monthly	≥80% of requests are processed within 10 days	4
	≥75%<80% of requests are processed within 10 days	3
	≥70%<75% of requests are processed within 10 days	2
	≥65%<70% of requests are processed within 10 days	1
	<65% of requests are processed within 10 days	0
Foreign Travel requests are processed in accordance with requirements. Foreign Travel trip reports due to be closed (within 30 days of return) are submitted to the Foreign Travel office in accordance with the requirements. Monthly	20% or fewer trip reports are outstanding (>30 days past due)	4
	25-29% trip reports are outstanding (>30 days past due)	3
	30-35% trip reports are outstanding (>30 days past due)	2
	36-40% trip reports are outstanding (>30 days past due)	1
	>40% trip reports are outstanding (>30 days past due)	0
Nuclear material control and accountability performance tests and resulting corrective actions are satisfactorily completed. Two tests are performed each year (pass/fail). Annual Metric	1 conducted each 6 mo's (2 annually) – both pass	4
	N/A	3
	1 conducted each 6 mo's (2 annually) – one pass/one fail	2
	1 conducted annually - pass	1
	1 conducted each 6 mo's (2 annually) – both fail	0
Self-Assessments – completion of internal assessments in accordance with schedules as well as completion of corrective actions in accordance with schedules. Annual	100% of scheduled assessments and corrective actions shall be completed in accordance with agreed upon schedules (to include approved schedule changes)	4
	90%-99%	3
	80%-89%	2
	70%-79%	1
	<70%	0
External evaluations – Satisfactory (or above) ratings and all corrective actions are developed/completed in accordance with schedules Annual	Satisfactory (or above) composite rating and 100% of corrective actions are completed in accordance with schedules	4
	90%-99%	3
	80%-89%	2
	70%-79%	1
	<70%	0

Performance Evaluation:

Outstanding: Performance meets the specified level averaged for the indicators (3.5-4 pt average)

Excellent: Performance meets the specified level averaged for the indicators (2.5-3.4 pt average)

Good: Performance meets the specified level averaged for the indicators (1.5-2.4 pt average)

Marginal: Performance meets the specified level averaged for the indicators (1-1.4 pt average)

Unsatisfactory: Performance less than Marginal (<1 pt average)

2.1.4 Provide management and operational excellence in achieving investment in maintenance and energy conservation efforts

The weight of this indicator is 25%.

The Contractor implements active, value-based, and informed management processes that provide for infrastructure that reliably meets or exceeds broad Laboratory expectations, at an acceptably low cost.

2.1.4.1 Stewardship Index – weighted index of the following measures (no single index will exceed a value of 1.0; i.e., values greater than 1.0 will rounded down to 1.0). Stewardship Index = sum of the individual indexes times their weighting factor.

Measure	Description	Desired Level of Performance	How is Index Calculated?	Weighting
Maintenance Investment Index (MII)	Actual Maintenance Costs as a percentage of RPV	Maintenance Investment Index at or above 2.5%	MII / 2.5%	40%
Facility Reliability Index (FRI)	[Modified Business Volume (BV) - Program Losses] x 100/Modified BV	99.95%	Actual FRI / 99.95%	30%
Energy Reinvestment Index (ERI)	Percent of annual energy costs reinvested towards energy conservation and efficiency	10%	Actual ERI / 10%	15%
Occupant Satisfaction – Image Index (II)	Annual survey of occupant satisfaction with facility condition and services	3.60	Actual Occupant Satisfaction / 3.60	15%

The weight of this sub-indicator is 60%.

Description: The appropriate level of maintenance and repair expenditures for facilities can be influenced by many factors, including size and complexity; types of finishes; current age and condition; mechanical and electrical system technologies; historic or community value; types or occupants or users; climate; criticality of role or function; labor, energy, and material process; and distances between buildings in inventory (NRC, 1990). An effective program for facilities maintenance and repair employs a combination of strategies and approaches. This sub-indicator is intended to be a measure of the Contractor's effectiveness at optimizing the life of facilities through adequate and timely maintenance and repairs. It includes a measure of the year-to-year investment in maintenance and repairs (MII), a measure of facility reliability (FRI), which is tied to programmatic impact (economic) resulting from service interruptions; and a measure of energy reinvestment (ERI), which establishes an accountability reference of energy stewardship and reflects comprehensive institutional planning with regards to overall energy efficiency planning. Finally, by measuring occupant satisfaction (II), one can assess how well the appearance of buildings and grounds are in keeping with surrounding community and stated image of the institution. The goal is to keep annual investments above 2.5% (MII) with minimal interruptions in service (ERI = 99.95%). Investment in energy conservation should be adequate to keep up with rising energy costs (10% annually), and occupant satisfaction should stay above 3.6 on a scale of 5 (mostly satisfied category).

Definitions:
Annual actual maintenance is as defined in FIMS and calculated using FIMS report 117 for SC facilities.

RPV is calculated using guidance from the Office of the Chief Financial Officer and is updated annually.

Occupant losses are defined by program interruptions that had a financial impact (total or partial loss of continuity of research; i.e., no alternatives available to replace lost time or data) as a result of an unplanned outage of facility services caused by a failed infrastructure system or component within the purview of the Contractor facilities organization. A program is financially impacted if the dollar loss meets the threshold for value-based reporting in the Event Reporting Criteria (7A) or management has determined that a number of smaller losses have occurred that individually may not meet the threshold, but collectively are deemed worthy of reporting under 10A.

The occupant satisfaction survey is conducted by the contractor as part of its participation in the Facility Issues Annual Benchmarking survey.

Energy reinvestment is the annual expenditure for energy conservation and efficiency efforts as compared to the total annual energy expenditures regardless of color of money. This includes the use of funds outside of DOE (e.g., Battelle, Third Party, or BPA).

Assumptions: Definition and method for calculating RPV, and annual actual maintenance will remain unchanged. The Maintenance Investment Index will be calculated for SC facilities excluding those facilities scheduled for accelerated cleanup. Providing for this exclusion allows for management to make investments in those facilities essential to the long-term mission of the Laboratory and not be arbitrarily driven to make investments in facilities without a future mission. The contractor will track performance of other facilities (SC-ACP, EM and Battelle private) through its performance management program. Performance against this indicator is dependent upon authorized funding for FY2003.

Performance Evaluation:

Outstanding: Stewardship Index of .98 or better

Excellent: Stewardship Index in the range of .95-.979

Good: Stewardship Index in the range of .90-.949

Marginal: Stewardship Index in the range of .85-.89

Unsatisfactory: Stewardship Index is less than .85

2.1.4.2 Identification and implementation of energy conservation measures that are commensurate with the Laboratory's strategy to establish a sustainable environment for conducting research and development

The weight of this sub-indicator is 40%.

Description: A well-planned and documented energy program is critical to identifying energy conservation measures that achieve continuous and life cycle cost effective improvements to increase the energy efficiency and effective management of energy and water within Laboratory facilities while increasing the use of clean energy sources. This indicator evaluates the Contractor's ability to identify and implement energy conservation measures that meet DOE Energy goals.

Definitions: None

Assumptions:
1) DOE Energy goals will remain the same.
2) No major programmatic loads added that impacts performance for milestone two.

Measures of progress:
1) Acquisition of at least 4% environmentally preferred power for Laboratory (consolidated laboratory) facilities.
   - Milestone Date – On or before March 31, 2003

2) Energy use reductions per square foot for the Laboratory (DOE and Battelle owned and leased) facilities in the Buildings Category (EMS4) show continuous improvement of at least 2% from previous year.
   - Milestone Date – September 30, 2003; report date – November 15, 2003

3) Showcase a wireless technology application in building/energy systems controls.
   - Milestone Date – On or before June 30, 2003

4) Qualify one office building for the Energy Star label.
   - Milestone Date – On or before September 30, 2003

5) Complete at least one energy audit of a major Laboratory facility.
   - Milestone Date – On or before June 30, 2003

6) Complete BPA funded project to perform energy upgrades to the 329 and 331 facilities. Proposed improvements include the installation of utility metering and reporting and conversion of hot water heat and humidifiers from electricity to natural gas.
   - Milestone Date – On or before July 31, 2003

7) Complete ESPC Phase II to reduce energy consumption for the Battelle campus facilities. Proposed improvements will include the installation of lighting controls, perimeter heating unit controls, variable air volume control of fume hoods, and reconfiguring supply fans per the project plan.
   - Milestone Date – On or before September 30, 2003

Performance Evaluation:

Outstanding:	Met at least 6 of 7 Milestones
Excellent:	Met 5 of 7 Milestones
Good:	Met 4 of 7 Milestones
Marginal:	Met at least 3 of 7 Milestones
Unsatisfactory:	Did not meet any of the milestones on the identified objectives or progress is achieved at the detriment to overall goals and mission of the Laboratory.

2.2 Maintain and enhance Laboratory capabilities/infrastructure to meet current and future mission needs

The weight of this objective is 25%.

Battelle and DOE recognize that they need to work together so that the Laboratory has the capabilities required to meet the Department's current and future mission needs. The purpose of the indicators under this objective is to track the Contractor's progress in meeting the milestones identified within key Contractor plans, which are important in ensuring the current and future needs of the Laboratory are met.

2.2.1 Enhance the capability of EMSL to support the scientific user community

The weight of this indicator is 25%.

2.2.1.1 Develop facility and capability activities for effective operation of the 900 MHz magnet.

The weight of this sub-indicator is 50%.

Description: This sub-indicator addresses facility and capability development activities that the Laboratory can control and that will be required for ultimate, effective 900 MHz magnet operation. It does not address the 900 MHz NMR installation/readiness specifically since the magnet is not yet owned, nor controlled, by the Laboratory.

Definitions: None.

Measures of progress:

There are two specific outcomes that will be used to measure this sub-indicator. Each of these outcomes has three specific milestones.

Outcome 1: Design, build, and implement an efficient and capacity-compatible He cryogen recovery and liquefaction system for the EMSL 900 MHz NMR magnet system.

- Milestone 1 - Complete design by 2/1/03, commence procurements & engineering
- Milestone 2 - Modify existing recovery system by 6/1/03
- Milestone 3 - Start actual recovery by 9/30/03

Outcome 2: Design and build unique, special-purpose 900 MHz NMR probes (either triple-resonance probe or cryo-cooled probe) for use with EMSL user and/or grand-challenge scientific research activities.

- Milestone 4 - Design and build a probe by 2/1/03
- Milestone 5 - Test and use one probe by 6/30/03
- Milestone 6 - Use results in a proposal to DOE by 9/30/03, or publish technical results in peer-reviewed literature

Assumptions: Performance against this sub-indicator is dependent upon authorized funding. Performance against milestone 6 is dependent on the 900 MHz magnet being operational and available to the Laboratory for use.

Performance Evaluation:

Outstanding:	Met 6 milestones
Excellent:	Met 5 of 6 milestones
Good:	Met 4 of 6 milestones
Marginal:	Met 3 of 6 milestones
Unsatisfactory:	Met 0-2 of 6 milestones

2.2.1.2 Enhance the Environmental Molecular Sciences Laboratories ability to meet its users and DOE's computational challenges by installing the HP supercomputer.

The weight of this sub-indicator is 50%.

Description: PNNL has contracted with the Hewlett-Packard Corporation to install a $24.5 M supercomputer based on Linux, the Quadrics interconnect, and 950 dual-processor nodes using the Intel Itanium 2 processor. When installation is complete the system is expected to deliver a theoretical peak performance of 11.4×10^{12} Floating Point Operations per Second, and rank as one of the most powerful computers on the planet. The system will be installed in two phases. The project requires operations to be moved to the first Phase of the HP supercomputer so the current IBM supercomputer can be removed to make room for the second phase of the HP supercomputer. PNNL is also performing extensive facility modifications, including electrical mechanical and architectural, in order to properly support the HP Supercomputer.

Definitions:
Full Phase 1 Installation: Phase1 consists of 256 Intel Itanium 2 processors and has a peak theoretical performance of 1×10^{12} Floating Point Operations per Second.
Initial Phase 2 Installation: Phase2 consists of an additional 1500 Intel Itanium 2 processors and has a peak theoretical performance of 6×10^{12} Floating Point Operations per Second.
Facility Modifications: In order to support the Phase2 and Phase2 Upgrade system the Molecular Science Computing Facility (MSCF) in the EMSL will require facility modifications. These include the installation of a 2nd Uninterruptible Power Supply (UPS), 5 additional air handlers and the supporting infrastructure for these additions.

Assumptions: PNNL receives sufficient funding in a timely manner for staffing and continued lease payment for the HP supercomputer. The HP supercomputer is made up of leading edge equipment and the system integration project plan is run by HP. It is assumed HP hardware will deliver the hardware based on the agreed to schedule.

Performance Evaluation:

Outstanding: 1) Bring the Phase 1 HP Supercomputer to full operational status and migrate operations off the IBM system such that the IBM can be shutdown by December 31, 2002.
2) Finish the facilities modifications, and bring the additional Phase 2 HP Supercomputer to full operational status by July 30, 2003.

Excellent:	1) Bring the Phase 1 HP Supercomputer to full operational status and migrate operations off the IBM system such that the IBM can be shutdown by January 31, 2003. 2) Finish the facilities modifications, and bring the additional Phase 2 HP Supercomputer to full operational status by August 30, 2003.
Good:	1) Bring the Phase 1 HP Supercomputer to full operational status and migrate operations off the IBM system such that the IBM can be shutdown by February 28, 2003. 2) Finish the facilities modifications, and bring the additional Phase 2 HP Supercomputer to full operational status by September 30, 2003.
Marginal:	1) Bring the Phase 1 HP Supercomputer to operational status by May 30th, 2003 leaving the IBM onsite. 2) Finish the facilities modifications, and initiate operations on the additional Phase 2 HP Supercomputer.
Unsatisfactory:	1) Phase1 HP Supercomputer not brought up to operational status during FY2003. 2) Phase2 supercomputer did not initiate operations in FY2003.

2.2.2 Establish Systems Biology and Computational capabilities required to realize PNNL 2010 strategy

The weight of this indicator is 25%.

2.2.2.1 Establish an operating pilot proteomics facility in LSL II

The weight of this sub-indicator is 50%.

Description: The Laboratory's strategic success in achieving the 2010 vision of a world-class systems biology program and facilities is based on successful development and demonstration of smaller individual projects and pilots. An important one is the establishment of an operating pilot proteomics facility. In FY2002, LSL II lab space was renovated to provide the ability for this. In FY2003, the following will occur:

1) Research equipment will be obtained, installed, and made operational in this space
2) Staff will be relocated and become operational in these labs
3) Facility will become an operating and productive pilot proteomics facility.

An operational and productive pilot proteomics facility will be able to demonstrate the integration of the component processes necessary for compositional characterization of protein complexes (molecular machines) as exemplified in the DOE's Genomes to Life (GTL) Program Goal One Project. The component processes include: 1) the ability to generate affinity reagents; 2) the ability to isolate protein complexes selectively; and 3) the ability to identify the protein constituents by mass spectrometric analysis.

Definition: A pilot proteomics facility ready for operations is defined as having the key research equipment installed, tested, and operating, and the essential staff in place ready for productive operations.

A facility is operational and productive when the following component processes are addressed:

1) Affinity reagents encompass any mechanism for specifically separating a given protein complex from other cellular constituents. Affinity reagents may be synthetic antibodies (scFv or FaB fragments), or recombinant proteins containing an affinity tag suitable for biochemical or immunological purification.

2) Protein complexes are associations of proteins required for the execution of specific cellular functions. They may be stable structures composed of tightly bound, constitutively present proteins such as ribosomes or cytochromes, or they may be dynamic, more transient structures associated with transcriptional regulation or signal transduction. A given protein complex is specified by the presence of an identified gene product.

3) Protein identification is defined as the use of mass spectrometric techniques together with accurate mass tags, partial amino acid sequence data, or peptide mass data to infer the identity of the parent protein. A complex is characterized when the major protein constituents have been identified.

Assumptions: In order to complete the research equipment in this lab space, new FY2003 GTL capital funding needs to be authorized. With the current FY2003 Continuing Resolution (CR) budget, no new funding has yet been authorized. This GTL authorization needs to occur no later than January 2003, in order to purchase, receive, and install the remaining research equipment necessary to result in an operating pilot proteomics facility by the end of FY2003. *The ability to achieve more than 4 complexes (which in of itself will be a stretch utilizing existing equipment) is dependent upon the procurement, receipt, and installation of the additional research equipment. If the CR is not resolved by January 31, 2003, PNNL will initiate a formal change control request as previously discussed, and agreed to with the assigned DOE/PNSO POC for this sub-indicator.*

Performance Evaluation: PNNL will provide DOE-RL a report/output from its laboratory information management system (LIMS) by the end of FY2003 that demonstrates the operational performance of the pilot proteomics facility as shown by the number of complexes characterized. Performance will be based on the following:

Outstanding:	Facility operational and 10 or more complexes characterized
Excellent:	Facility operational and 3 to 9 complexes characterized
Good:	Facility operational and 1 or 2 complexes characterized
Marginal:	Facility ready for operations and 0 complexes characterized
Unsatisfactory:	Facility not ready for operations

2.2.2.2 Provide adequate capability to meet the Computational Science needs across major PNNL research areas

The weight of this sub-indicator is 50%.

Description: The Laboratory's major research mission areas require facilities and computational resources (equipment and staff) to achieve world-class results. In FY2003, the following will occur:

1. A written assessment and requirements document will be developed that summarizes the comprehensive computational needs (facilities, people, equipment and computational resources) across the major mission areas of the Laboratory; biology, climate, subsurface/environmental, engineering, and chemistry.
2. Next generation computing resource will be procured, installed, and made operational for use across the labs computational research programs.
3. Hire a Division Director for Computational Sciences & Applied Math

Higher performance computational science application development is becoming more common across PNNL's various scientific disciplines, and demonstrated computational expertise and capabilities are often the discriminator when scientific research proposals compete for funding. An assessment will be performed that captures the needs of the major scientific mission areas for PNNL, identifies gaps in facilities, staff, computing resources, and provides implementation recommendations. Computational resources are currently being utilized through an aging computer called "Colony". This resource is scheduled for replacement in FY2003 with a more current architecture machine. This replacement computer will be made available through an internal proposal/review process to provide compute cycles to major research areas across the lab; including subsurface modeling, biology, engineering, climate modeling, chemistry, homeland security, and other mission critical areas.

PNNL is searching for a person to lead the computational efforts for the lab, and perform the duties of Director of Computational Sciences & Applied Math. This person would also be the lab's liaison to DOE's Advanced Scientific Computational Research office; and provide leadership across the complex in the area of computational sciences research.

Definition: Computational sciences supporting research domains are those that typically require innovative applications and parallel processor based systems to accomplish modeling, simulation, and analysis of complex scientific and engineering systems/processes.

Assumptions: In order to deliver the assessment/requirements document, funding would need to be identified from the Computational Sciences & Engineering Initiative, and/or supplemental funding from overhead sources to accomplish this deliverable. Capital GRE funding would need to be approved for the purchase of a "Colony" replacement; work is underway to secure this funding.

Performance Evaluation: Completion of the following actions will be used to evaluate the contractor's performance against this indicator.

1. PNNL will present to DOE PNSO an assessment and requirements report that captures the gaps necessary to fill computational sciences needs in support of the major research missions for DOE and PNNL. Delivery 3rd quarter of FY2003.
2. Successful procurement, installation, and acceptance of a computational high performance cluster computer to include at least 0.3 teraflops of peak processing power, a high performance communications fabric, Linux, and associated development software. This system will be accepted and available for full use by researchers across PNNL by end of FY2003.
3. Successful selection and hiring of a Director of Computational Sciences by 3rd quarter of FY2003.

Performance will be based on the following:

Outstanding:	Completion of all 3 above deliverables
Excellent:	Completion of 2 of 3 above deliverables
Good:	Completion of 1 of 3 above deliverables
Marginal:	Progress but none of the above deliverables completed
Unsatisfactory:	No progress on deliverables

2.2.3 Align the Laboratory's nuclear science capabilities with future DOE mission needs

The weight of this indicator is 25%.

2.2.3.1 Identify and implement measures that are commensurate with the Laboratory's strategy to consolidate and sustain radiological and radiochemical capabilities.

The weight of this sub-indicator is 50%.

Description: PNNL has a rich history of significant contributions to national and international advances in nuclear science and technology. Today its substantial nuclear capability is available for deployment in the critical areas of the nuclear legacy; the threat of nuclear, chemical, and biological weapons proliferation; and energy generation. To retain nuclear science and technology as part of PNNL's multi-program signature, facility and staff capabilities must be sustained and new talent recruited and developed.

Measures of Progress:

Prepare a PNNL Integrated Nuclear Strategy document for review by the PNNL Management Council and for discussion with RL and other DOE offices as appropriate. As part of this strategy, PNNL's long-term needs for radiological and radiochemical capabilities will be identified.

- Milestone date – March 30, 2003

Prepare documents similar to a Critical Decision 0 submittal (i.e., mission justification), which specify facility capabilities required to implement PNNL's Integrated Nuclear Strategy.

- Milestone date – September 30, 2003

Prepare a SWOT-like (strengths, weakness, opportunities, and threat) document identifying key staff strengths and weaknesses by discipline in support of the implementation of the Integrated Nuclear Strategy. This staff-needs document will be the basis for FY2004 and out-year hiring and/or retraining actions.

- Milestone date - September 30, 2003

Assumptions: The Management Council's decision on the Laboratory's Integrated Nuclear Strategy could generate the need for change control for these milestones. The SWOT document will address both staff capabilities not currently available at the Laboratory and those capabilities that the Laboratory is in danger of losing through attrition.

Performance Evaluation:

Outstanding:	Three milestones completed and Management Council path forward decision established
Excellent:	Three milestones completed
Good:	Two milestones completed
Marginal:	One milestone completed
Unsatisfactory:	No milestones completed

2.2.3.2 Establish new, joint research and development projects with academia, using PNNL's nuclear capabilities, which will provide opportunities to develop and recruit future nuclear scientists and engineers.

The weight of this sub-indicator is 50%.

Description: This sub-indicator will measure the ability of the contractor to increase development opportunities for future nuclear researchers and engineers through collaborations with academia on R&D projects.

The Contractor will establish, in cooperation with the Western Nuclear Sciences Alliance and/or other academic organizations as appropriate, new R&D projects in which PNNL and university-based nuclear capabilities will be used in collaboration. These projects will utilize students who are interested in seeking careers in nuclear science and engineering.

Definitions: The Western Nuclear Sciences Alliance includes the following four universities: Oregon State University, Washington State University, University of California-Davis, and University of California-Berkeley. PNNL collaborated on the Alliance's successful proposal under DOE-NE's new Innovations in Nuclear Infrastructure and Education Program. PNNL also collaborates in nuclear science and technology R&D with several other universities nation-wide.

Assumptions: None.

Performance Evaluation:

Outstanding:	Four or more joint R&D projects established or four or more student positions created
Excellent:	Three joint R&D projects established or three student positions created
Good:	Two joint R&D projects established or two students position created
Marginal:	One joint R&D project established or one student position created
Unsatisfactory:	No joint R&D projects established

2.2.4 Identify and provide cross cutting physical and supporting infrastructure capabilities consistent with PNNL 2010 strategy

The weight of this indicator is 25%.

2.2.4.1 Increase internet connection to accommodate strategic research collaborations requiring extensive computation and transfer of large data sets.

The weight of this sub-indicator is 20%.

Description: This indicator measures Battelle's ability to provide the networking bandwidth (capacity and performance) required to interact with research data sets and computational requirements of increasing complexity and size with wide geographic dispersion. The indicator measures the progress towards strategic objectives related to the PNNL 2010 strategy and the PNNL IT Infrastructure Strategic Plan - FY 2002-06.

Definitions:

Tri-Cities inter-network exchange: Tri-Cities regional "meet-me" to provide network interconnection and peering for Internet Service Providers (ISP) and local businesses to exchange regionally based Internet Protocol (IP) traffic.

OCx: A high-speed optical carrier network connection, provided and supported by a contracted telecommunications or internetworking vendor. OC12 is an abbreviation for Optical Carrier 12, a 622 Mbps (megabits per second) circuit. OC48 is an Optical Carrier 48 circuit of 2.5 Gbps (gigabits per second) capacity. The existing OC3 circuit's capacity is 156 Mbps.

Pacific Northwest Gigapop: The Pacific Northwest's access point to the nation's leading edge, high-bandwidth, next-generation Internet networks including Internet2/Abilene, high-performance Federal nets, and high-performance commodity Internet offerings.

ESnet: The Energy Sciences Network (ESnet) is a high-speed network serving Department of Energy scientists and collaborators worldwide. ESnet provides direct connections to all major DOE sites and to more than 100 other networks. ESnet is funded by the DOE Office of Science to provide network and collaboration services in support of the agency's research missions.

Measures of progress:

1. Establish high-speed connection (1.0 Gbps) to the Tri-Cities inter-network exchange.
   - Milestone Date – On or before January 31, 2003

2. Enhance the PNNL Internet routers, firewalls, and border network to support OC12 Internet PNNL network.
   - Milestone Date – On or before March 31, 2003

3. Increase the Internet connection to the Pacific Northwest Gigapop (Seattle) from OC3 to OC12 to support regional research collaborations.
   - Milestone Date – On or before June 30, 2003

4. Deploy 540 additional Gigabit Ethernet ports for connecting high-end workstation and servers to the PNNL network. This more than doubles the number of Gigabit Ethernet ports, bringing the total to 900.
   - Milestone Date – On or before August 30, 2003

5. Increase the Internet connection between the Pacific Northwest Gigapop and ESnet from OC3 to OC12 to support research collaborations with other DOE Office of Science laboratories.
   - Milestone Date – On or before September 30, 2003

6. Implement higher bandwidth Internet backup path capable of supporting at least 10 Mbps (current backup path is T1 or 1.54 Mbps).
   - Milestone Date – On or before September 30, 2003

Assumptions: FY2003 continuing resolution constraints on GPE capital equipment funding are eliminated by February 1, 2003

Performance Evaluation:

Outstanding:	Met at least 5 of 6 Milestones
Excellent:	Met 4 of 6 Milestones
Good:	Met 3 of 6 Milestones
Marginal:	Met 2 of 6 Milestones
Unsatisfactory:	Met less than 2 of 6 Milestones

2.2.4.2 Increase computer network capability to accommodate strategic classified research collaborations requiring extensive computation and transfer of large data sets.

The weight of this sub-indicator is 20%.

Description: This indicator measures Battelle's ability to provide the IT intra- and internetworking connectivity required to facilitate classified computing and data transfer with classified computing resources and networks. The indicator measures the progress towards objectives related to research requirements and the PNNL IT Infrastructure Strategic Plan - FY 2002-06.

Definitions: Limited Area: A security area or facility used for the protection and/or use of classified matter and/or Category III quantities of special nuclear material where trained staff or other internal security measures provide means to control access and prevent inadvertent or deliberate access by authorized persons.

Measures of progress:

1. Conduct a comprehensive analysis of PNNL classified computer networking and computing requirements. Prepare a recommendation and business model to address those needs for incorporation into the PNNL IT Strategic Plan for FY 2004-2008.
   - Milestone Date – On or before June 30, 2003

2. Implement classified network connectivity to SIPRNET into the NSB Limited Area or other single demarcation point.
   - Milestone Date – On or before September 30, 2003

3. Provide classified networking and computing requirements for the design of the new multi-program research laboratory.
   - Milestone Date – On or before September 30, 2003

4. Implement appropriate classified network connectivity between the 3760 building and the NSB Limited Area.
   - Milestone Date – On or before September 30, 2003

5. Provide network access to one or more high-performance classified computing resources.
   - Milestone Date – On or before September 30, 2003

Assumptions: Stable programmatic drivers and funding for items 2, 4 and 5.

Performance Evaluation:

Outstanding:	Met at least 4 of 5 Milestones
Excellent:	Met 3 of 5 Milestones
Good:	Met 2 of 5 Milestones
Marginal:	Met 1 of 5 Milestones
Unsatisfactory:	Met 0 of 5 Milestones

2.2.4.3 Develop and commence implementation of a strategy to maintain continuity of the Department Of Energy science mission while enabling accelerated cleanup of the Hanford 300 Area.

The weight of this sub-indicator is 60%.

Description: The current DOE initiative to accelerate the Hanford cleanup schedule indicates significant cost savings can be achieved by reducing the life-cycle cleanup costs associated with the legacy facilities, including reductions in surveillance and maintenance costs of deactivated

facilities. Supporting this initiative provides a challenge for the Laboratory to ensure that science and technology mission objectives are met, and critical capabilities are not lost during the transition out of the legacy facilities. This indicator measures progress toward development and implementation of a DOE supported strategy for retention of critical science and technology capabilities and relocation from facilities within the cleanup zone to new facilities central to the main campus. This is a multi-year indicator, and progress on this measure will be supported through the accomplishment of the following tasks:

Definitions: Cheap to Keep – Facility is vacated, removed from the billable space system, and transferred to the surplus facilities building manager. Waste materials are containerized or as appropriate removed for disposal, all non-essential utilities are isolated and the facility is placed under routine surveillance and maintenance controls with appropriate postings identifying points of contact and access restrictions.

Measures of progress:

1. Develop and provide to the Department of Energy a white paper articulating the strategy for maintaining continuity of the science mission while supporting the accelerated cleanup. The paper should include impacts, divestitures, replacement needs, and financing options as requested by the Office of Science at the FY2002 PNNL On-Site review.
   - Milestone Date - On or before December 20, 2002

2. Conduct an engineering study of utility infrastructure requirements necessary to support the 300 Area transition strategy. The study will contain sufficient detail to provide a basis for continuity of operations decisions during transition, a recommended final utility configuration, and a more detailed cost estimate than currently available.
   - Milestone Date - On or before August 1, 2003

3. Consolidate staff and capabilities from the Environmental Sciences Laboratory (Building 3720) to the Radiochemical Processing Laboratory (Building 325) to prepare for shutdown of 3720 in support of the 300 Area transition strategy.
   - Milestone Date - On or before September 30, 2003

4. Complete an evaluation of alternatives for managing PNNL's hazardous and radioactive wastes and issue an implementation plan for closing the 305B facility in support of the 300 Area transition strategy.
   - Milestone date - On or before August 1, 2003

5. Place two PNNL operated 300 Area facilities (3718S & 332) in "Cheap to Keep" closure awaiting transfer to the River Corridor Cleanup Contractor in support of the 300 Area transition strategy.
   - Milestone date - On or before September 30, 2003

Assumptions:

1. FY2003 continuing resolution constraints on new construction starts are eliminated by February 1, 2003
2. PNNL is successful in working with DOE-SC and other stakeholders to gain support for and finalize the strategy by April 1, 2003.
3. DOE supports RPL capital upgrades needed to consolidate EM mission work.
4. Change Control will be performed as required to this measure to reflect enhancements made to the strategy as it is being finalized with stakeholders.

Performance Evaluation:

Outstanding: Met 5 of 5 milestones

Excellent: Met 4 of 5 milestones

Good:	Met 3 of 5 milestones
Marginal:	Met 2 of 5 milestones
Unsatisfactory:	Met 1 of 5 milestones

2.3 Provide integrated management systems that enable effective and efficient business performance

The weight of this Objective is 25%

2.3.1 Progress against selected improvement initiatives on the Laboratory's "Operations Improvement Agenda."

The weight of this indicator is 100%.

Description: The Operations Improvement Agenda is tracked as part of the overall "Laboratory Agenda" and includes key Laboratory-level Operations Improvement Initiatives (OIIs) as well as selected projects sponsored by individual management systems. All of the efforts are designed to increase the efficiency and effectiveness of laboratory management systems. This indicator measures Battelle's ability to provide integrated management systems that enable effective and efficient business performance within the Laboratory. The indicator measures the progress towards selected strategic objectives identified during the Laboratory's business planning process. The following objectives and their corresponding milestones shall be utilized to measure progress in FY2003:

Measures of progress:

Institutionalize IOPS – Objective: To export the Integrated Operations System (IOPS) concepts and tools to Sequim thus completing a multi-year effort to deploy IOPS to all PNNL's lab-intensive facilities in order to better establish and communicate safe laboratory practices, identify and control workspace hazards, identify and obtain appropriate training, and authorize access to workspaces for an efficient and productive laboratory.

- Milestone Date – Complete IOPS implementation at Sequim on or before September 30, 2003

Hazards Analysis – Objective: to Integrate and enhance existing Hazard Analysis tools (and consider whether additional tools are needed) to assure the consistent and effective identification, evaluation, and mitigation of hazards; including an efficient work start-up authorization process based on an approved Hazard Analysis and consistent with PNNL R2A2s.

- Milestone Date – The revised EPR system will be rolled out to the Laboratory on or before May 31, 2003

Radiological Material Tracking System – Objective: Enhance and implement laboratory-wide the Radiological Material Tracking System to provide integration of requirements so that key stakeholders will have the ability to perform real-time checking to ensure compliance with Facility Use Agreement (FUA) operating boundaries for radioactive materials.

- Milestone Date – A Revised Radiological Material Tracking System will be rolled out to the RPL before September 30, 2003

Proposal Pricing System (PPS) – Objective: Develop and implement a new Proposal Pricing system, which will streamline the process and tools associated with proposal pricing.

- Milestone Date – The new Proposal Pricing System will be rolled out to current PPS users and made generally available to the Laboratory on or before March 30, 2003

PNNL Work Authorization Action Plan - Objective: To Implement corrective actions and improvements related to authorization of work and funds control.

- Milestone Date – Submit to DOE, PNNL's Work Authorization process document - December. 30, 2002
- Milestone Date – Re-Implement Record of Decision for DOE Order 412.1 on or before December 30, 2002
- Milestone Date – Revise authorization and overrun SBMS subject areas consistent with DOE O 412.1 on or before December 31, 2002

Improve Implementation of the Customer Service Model – Objective: To improve the implementation of the Customer Service Model.

- Milestone Date – The Laboratory Dashboard will include performance indicators for each of the three core processes on or before September 30, 2003

Minimum Contract Performance Requirements – Objective: To improve the clarity and objectiveness associated with contract fee adjustments.

- Milestone Date – Develop and submit proposed contract modification that specifically defines the minimum performance expectations as a replacement to DEAR 970.5215-3, *Conditional payment of fee, profit, or incentives,* on or before June 30, 2003

Assumptions: These milestones assume the availability of the required funding and other key resources identified in the project plans for each initiative.

Performance Evaluation:

Outstanding:	Met at least 8 of 9 Milestones
Excellent:	Met 7 of 9 Milestones
Good:	Met 6 of 9 Milestones
Marginal:	Met 5 of 9 Milestones
Unsatisfactory:	Met less than 5 Milestones

ELEMENT	Adjectival Rating	Value Points	Indicator Weight	Total Points	Objective Weight	Total Points
2.0 Management and Operational Excellence						
2.1 Provide management and operational excellence in achieving key contract performance requirements						
2.1.1 Provide ESH&Q management systems that sustain and enhance Laboratory operations			25%			
2.1.2 Performance against business management sub-indicators (roll up from Table 2.2)			25%			
2.1.3 Sustain and enhance the effectiveness of Integrated Safeguards and Security			25%			
2.1.4 Provide management and operational excellence in achieving adequate investment in maintenance and energy conservation efforts (roll up from Table 2.3)			25%			
			Objective 2.1 Total		50%	
2.2 Maintain and enhance Laboratory capabilities/ infrastructure to meet current and future mission needs						
2.2.1 Enhance the capability of EMSL to support the scientific user community (roll up from Table 2.4)			25%			
2.2.2 Establish Systems Biology and Computational capabilities required to realize PNNL 2010 strategy (roll up from Table 2.5)			25%			
2.2.3 Align the Laboratory's nuclear science capabilities with future DOE mission needs (roll up from Table 2.6)			25%			
2.2.4 Identify and provide cross cutting physical and supporting infrastructure capabilities consistent with PNNL 2010 strategy (roll up from Table 2.7)			25%			
			Objective 2.2 Total		25%	
2.3 Provide integrated management systems that enable effective and efficient business performance						
2.3.1 Progress against selected improvement initiatives on the Laboratory's "Operations Improvement Agenda."			100%			
			Objective 2.3 Total		25%	
					Critical Outcome 2.0 Total	

Table 2.1. Management and Operational Excellence Critical Outcome Performance Rating Development

ELEMENT	Adjectival Rating	Value Points	Weight	Weighted Score	Overall Weighted Score
2.1.2 Performance against Business Management sub-indicators					
2.1.2.1 Cost Management Trends: Overhead cost as a percent of Laboratory's 1830 fully-burdened average charge-out rate			50%		
2.1.2.2 Cost Management Trends: Labor Overhead as a multiplier on the 1830 direct charged operating labor costs			25%		
2.1.2.3 Resource Management Trends: Direct FTEs as a percent of the total Laboratory FTEs			25%		
				Indicator 2.1.2 Total	

Table 2.2. Performance Indicator 2.1.2 Score Calculation

ELEMENT	Adjectival Rating	Value Points	Weight	Weighted Score	Overall Weighted Score
2.1.4 Provide management and operational excellence in achieving investment in maintenance and energy conservation efforts					
2.1.4.1 Stewardship Index			60%		
2.1.4.2 Identification and implementation of energy conservation measures that are commensurate with the Laboratory's strategy to establish a sustainable environment for conducting research and development			40%		
				Indicator 2.1.4 Total	

Table 2.3. Performance Indicator 2.1.4 Score Calculation

ELEMENT	Adjectival Rating	Value Points	Weight	Weighted Score	Overall Weighted Score
2.2.1 Enhance the capability of EMSL to support the scientific user community					
2.2.1.1 Develop facility and capability activities for effective operation of the 900 MHz magnet.			50%		
2.2.1.2 Enhance the Environmental Molecular Sciences Laboratories ability to meet its users and DOE's computational challenges by installing the HP supercomputer.			50%		
				Indicator 2.2.1 Total	

Table 2.4. Performance Indicator 2.2.1 Score Calculation

ELEMENT	Adjectival Rating	Value Points	Weight	Weighted Score	Overall Weighted Score
2.2.2 Establish Systems Biology and Computational capabilities required to realize PNNL 2010 strategy					
2.2.2.1 Establish an operating pilot proteomics facility in LSL-II			50%		
2.2.2.2 Provide adequate capability to meet the Computational Science needs across major PNNL research areas			50%		
				Indicator 2.2.2 Total	

Table 2.5. Performance Indicator 2.2.2 Score Calculation

ELEMENT	Adjectival Rating	Value Points	Weight	Weighted Score	Overall Weighted Score
2.2.3 Align the Laboratory's nuclear science capabilities with future DOE mission needs					
2.2.3.1 Identify and implement measures that are commensurate with the Laboratory's strategy to consolidate and sustain radiological and radiochemical capabilities			50%		
2.2.3.2 Establish new, joint research and development projects with academia, using PNNL's nuclear capabilities, which will provide opportunities to develop and recruit future nuclear scientists and engineers.			50%		
				Indicator 2.2.3 Total	

Table 2.6. Performance Indicator 2.2.3 Score Calculation

ELEMENT	Adjectival Rating	Value Points	Weight	Weighted Score	Overall Weighted Score
2.2.4 Identify and provide cross cutting physical and supporting infrastructure capabilities consistent with PNNL 2010 strategy					
2.2.4.1 Increase internet connection to accommodate strategic research collaborations requiring extensive computation and transfer of large data sets			20%		
2.2.4.2 Increase computer network capability to accommodate strategic classified research collaborations requiring extensive computation and transfer of large data sets			20%		
2.2.4.3 Develop and commence implementation of a strategy to maintain continuity of the Department Of Energy science mission while enabling accelerated cleanup of the Hanford 300 Area.			60%		
				Indicator 2.2.4 Total	

Table 2.7. Performance Indicator 2.2.4 Score Calculation

Total Score	4.0 - 3.5	3.4 - 2.5	2.4 - 1.5	1.4 - 0.5	<0.5
Final Rating	Outstanding	Excellent	Good	Marginal	Unsatisfactory

Table 2.8. Operational Excellence Critical Outcome Final Rating

3.0 LEADERSHIP EXCELLENCE (15%)

Through Battelle's leadership and regional partnerships, PNNL will become recognized as an enduring local, regional and national asset.

The weight of this outcome is 15%.

The Leadership Excellence Critical Outcome shall measure the overall effectiveness/performance of the Contractor's programs to help establish a robust, sustainable, regional economy, and to attract, develop and retain critical staff necessary to achieve simultaneous excellence in science and technology, operations and community trust. It also measures the relevance of the Laboratory to economic and S&T needs of the region, along with the effectiveness/performance of the Contractor's K-20 education programs. Performance objectives and indicators to be utilized in the evaluation of the Leadership Excellence critical outcome have been developed in partnership with the appropriate DOE HQ, PNNL Site Office, and RL counterparts and are listed below. These performance objectives and indicators identify significant activities/requirements important to the success of the Laboratory's business systems as identified by the Department and/or its customers. The reviewers (PNNL Site Office, RL and/or HQ) as a primary means of determining the overall Leadership Excellence critical outcome performance rating shall utilize these objectives and indicators.

Each of the performance indicators has an associated metric that translates the level of performance to an adjectival rating. Scoring of the individual performance indicators is based on the point scheme identified within section I. The overall adjectival rating is then computed by multiplying the weight of each performance indicator and summing them all to develop an overall score for each objective. The score for each objective within the outcome is then computed in the same manner to arrive at an overall score for the outcome (see Table 3.1 at the end of this section). The overall value points earned are then compared to Table 3.4 to determine the overall adjectival rating.

Objectives and Performance Indicators:

3.1 Attract, develop and retain the critical staff necessary to achieve simultaneous excellence in S&T, operations, and community trust

The weight of this objective is 30%.

3.1.1 Identify PNNL "best in class" workgroups by examining staff engagement assessment scores and objective performance data. Utilize this data to develop best practices training programs and talent profiles

The weight of this indicator is 100%.

Description: The Laboratory's strategic success depends on leaders who can attract, motivate and retain staff members who are committed to the Laboratory's strategic objectives DOE critical outcomes. A baseline assessment process (BAP) for measuring leadership effectiveness in engaging and motivating staff toward outcomes is sought, as a planning and building block for achieving the Laboratory 2010 outcomes articulated by Battelle and DOE-RL leadership.

Definitions: A baseline assessment process is defined as the completion of a workplace quality scorecard for individual work units that have greater than 5 staff members, or greater than 5 staff members responding to the survey.

Assumptions: None

Performance Evaluation: Completion of the following actions will be used to evaluate the contractor's performance against this indicator.

1. Conduct 50 Strengthfinder assessments for Technical Group Managers by December 31st, 2002.

2. Complete an analysis to define talent profiles for technical group managers (TGM) positions in PNNL Research Divisions by March 31st, 2003.

3. Complete an analysis to define productivity measures for Research Division workgroups.

4. Increase the Laboratory overall workplace engagement assessment GrandMean score in FY2003 by 0.09.

Outstanding:	Completion of all 4 actions listed above
Excellent:	Completion of 3 out of the 4 actions listed above
Good:	Completion of 2 out of the 4 actions listed above
Marginal:	Completion of 1 out of the 4 actions listed above
Unsatisfactory:	Completion of none of the actions described above

3.2 Demonstrate the relevance of Pacific Northwest National Laboratory to the needs of the community and the region

The weight of this objective is 50%.

3.2.1 Support growth of the local and regional technology-based primary business sector

The weight of this indicator is 40%.

3.2.1.1 The number of new business and expansions in the local area where Battelle had a material role in their establishment

The weight of this sub-indicator is 30%.

Description: The number of new businesses in the local area, or business expansions, where the Contractor had a material role in their establishment through one or more of its economic development programs. These programs include the Entrepreneurial Support Program, the Technology Assistance Program (TAP), and the Targeted Support Program (TSP).

Definitions:

Technology-based: Business whose product fundamentally embodies new technology or whose operations are substantially improved by applying technology.

Primary business sector: Business whose revenues derive from sources outside the local area, and not Hanford cleanup related.

Material role in establishment: It is recognized that new businesses usually involve collaborative help from multiple participants. Likewise, business expansions often are made possible because of help from one or more entities. To receive credit regarding claims for this indicator, the Contractor is expected to provide material or substantive assistance that result in the success of a new business or expansion of an existing business.

For assistance to be determined to be material it must be deemed to have played a significant role in the startup or expansion claimed; i.e. without the assistance, success would have been more difficult and/or less likely. The following activities are examples of the kind of assistance that is expected (these are only examples; other kinds of assistance would also qualify):

- Entrepreneurial Support, such as in business plan development, licensing, leasing, or transfer of unused government or PNNL property
- Technology assistance
- Technology and intellectual property demonstration and transfer support
- Support for marketing studies
- Capital investments or loans
- Leads for business relocation or expansion
- Responding to community economic entities requests for support for clients

For each new business or expansion claimed, the Contractor is to provide documentation delineating assistance provided (timeframe assistance occurred, types of assistance provided, and a detailed description of how assistance benefited the company). Additionally, any letters of attestation from businesses helped that state the opinion of the recipient as to the value of the assistance provided would be helpful.

For the assistance to be evaluated, verification of qualifying companies will occur via visits to the business(s) being claimed. The following criteria will be used as a basis for DOE's evaluation: (1) Required Business Plan, (2) Required Facilities/Equipment, (3) Management Team in Place, (4) Support Staff Hired, (5) Financing in Place, (7) Technology Protected, (8) License(s) in Place, (9) Product Status, and (10) Marketing and Sales.

Local Area: Includes the area within a 50-mile radius around PNNL.

Assumptions: The Laboratory will receive continuing funding (though 3161 is unlikely) for Entrepreneurial Support Program, TAP, and TSP.

Performance Evaluation:

Outstanding:	6 or more new or expanded businesses in the area where Battelle had a material role in their establishment
Excellent:	5 new or expanded businesses in the area where Battelle had a material role in their establishment
Good:	4 new or expanded businesses in the area where Battelle had a material role in their establishment
Marginal:	3 new or expanded businesses in the area where Battelle had a material role in their establishment
Unsatisfactory:	less than 3 new or expanded businesses in the area where Battelle had a material role in their establishment

3.2.1.2 Effectiveness in providing technical assistance to local and regional firms

The weight of this sub-indicator is 35%.

Description: This indicator has been developed to track the effectiveness of the Laboratory's Technology Assistance Program in helping to diversify the regional economy. The evaluation will be subjective in nature and includes criteria in the following three areas: number of firms

assisted, quality of assistance provided, and overall rating provided by the sponsors. Based on the overall performance within each of the three areas identified above, the PNNL Site Office and appropriate RL staff shall assign an overall subjective rating for this indicator.

Definitions:

- Regional firms - Regional firms are those located in the Pacific Northwest, which includes Washington, Idaho, Oregon.
- Local Area: Includes the area within a 50-mile radius around PNNL.

Evaluation Criteria: The following criteria shall be utilized in the evaluation of each of the four areas being utilized to evaluate this indicator:

- Number of Firms Assisted - The number of firms that have initiated technical assistance. Technical assistance is considered to be initiated after three events have occurred: 1) the firm has submitted a written request for assistance, 2) an assistance agreement has been signed by Battelle and the firm, and 3) funding has been allocated to a researcher to provide technical assistance. Technical Assistance is considered to have been provided after a client has accepted the technical services offered and the services have been used. Technical assistance can also take the form of a Laboratory-funded study done by graduate students at WSU Tri-Cities. This type of assistance is considered initiated after the students and the client have met to scope the study.

- Quality of Assistance – This factor is based upon a PNNL Site Office-approved Battelle survey provided to all recipients of technical assistance projects. Information to be used comes from question #1 on the survey - *Overall, how would you rate the interaction process with PNNL?* and item #2, *Please rate the usefulness of the technical assistance provided by PNNL.* Satisfaction will be measured on a five point scale where:
  1 = Very Dissatisfied
  2 = Dissatisfied
  3 = Neutral
  4 = Satisfied
  5 = Very Satisfied

  The specific measurement for this factor will involve the percentage of recipients with a response of satisfied or very satisfied (4 and 5 of the 5-point scale).

- Rating by Sponsors – This factor will be based on the overall rating concerning the overall quality of work performed by the Technology Assistance Program and queried by the PNNL Site Office. The quality will be measured on the standard adjectival ratings of Outstanding, Excellent, Good, Marginal, and Unsatisfactory, utilizing the adjectival rating definitions provided within Section I of this appendix.

Assumptions: At least 1600 staff-hours worth of direct and indirect funding for the Technology Assistance Program.

Performance Evaluation: Figure 3.1 below will be utilized by the DOE-RL reviewer(s) as guidance in the development of the overall subjective rating of Outstanding, Excellent, Good, Marginal, or Unsatisfactory.

Evaluation Factor	Outstanding	Excellent	Good	Marginal	Unsatisfactory
Number of Firms Assisted	40 or more	30 – 39	15 – 29	6 – 15	5 or less
Quality of Assistance	85% or greater	75% - 84%	60% - 74%	50% - 59%	49% or fewer
Rating by Sponsor	Outstanding	Excellent	Good	Marginal	Unsatisfactory

Figure 3.1

3.2.1.3 Develop and champion at least one new economic development initiative

The weight of this sub-indicator is 35%.

Description: One manifestation of the vitality of the Contractor's economic development efforts is that new approaches and initiatives for economic development are devised and pursued. In the absence of new approaches, there is danger that new opportunities will be missed because they don't fit the existing programs, or that the Contractor's economic development efforts will be taken for granted by stakeholders and therefore ignored, or that complacency will set in. This performance indicator is designed to assess the degree to which the Contractor is developing and implementing useful and effective new approaches for economic development. Past examples of new economic development initiatives include the Federal and State Technology Partnership Program proposal (FY2001), the Tri-Cities Venture Group (FY2000), the Technology Investor Forum (FY1998), the Targeted Support Program (FY1997), the SBIR Alerting Service (FY1997). The evaluation will be subjective in nature and includes criteria in the following five areas: number of new initiatives, degree of initiative implementation, fit with PNNL's economic development mission, observed immediate impact, and likelihood of future impact. Based on the overall performance within each of the five areas identified above, the PNNL Site Office and appropriate RL staff shall assign an overall subjective rating for this indicator. It is possible, for example, to achieve an outstanding rating by implementing a single, large, impactful new initiative; or by developing several new initiatives with varying degrees of implementation and impact.

Definitions:
Economic Development Initiative: A new program, approach, offering, recurring event, or one-time event that is designed to accomplish PNNL's economic development mission to diversify the local economy.

Local Area: Includes the area within a 50-mile radius around PNNL.

Assumptions: Funding will be made available to implement new economic development initiatives as appropriate.

Performance Evaluation:

Figure 3.2 below will be utilized by the DOE-RL reviewer(s) as guidance in the development of the overall subjective rating of Outstanding, Excellent, Good, Marginal, or unsatisfactory.

Evaluation Factor	Outstanding	Excellent	Good	Marginal	Unsatisfactory
Number of New Initiatives	3 or more	2	1	1	0
Degree of Initiative Implementation	Fully funded and implemented	Complete design, partial funding	Designed on paper	Conceptual design	Not designed
Fit with PNNL's Economic Development Mission	In complete alignment	Strong alignment, but with some divergence	Generally aligned	Somewhat aligned	Not aligned
Observed Immediate Impact	Significant impact	Adequate impact	Minor impact	Insignificant impact	No impact
Likelihood of Future Impact	Significant impact likely	Adequate impact likely	Impact somewhat likely	Impact possible	Impact unlikely

Figure 3.2

3.2.2 Document the success of the region's major research institutions in their collaboration to find science and technology solutions to regional needs

The weight of this indicator is 40%

3.2.2.1 Find solutions to significant regional needs from the science and technology resources available in the Northwest's major research institutions

The weight of this sub-indicator is 35%.

Description: Using the self-described needs of each of the three states in the Northwest, identify a reduced list of needs common to the states of the region and for which there may be potential scientific and/or technological solutions. Using the data mining, information visualization, or other available tools, identify a set of inventions and/or capabilities from the scientific and technology resources of the Northwest's major institutions that represent potential solutions to regional needs.

Definition: Regional area - Included in the NW are Washington, Idaho, and Oregon
Research Institutions – The list includes, but is not limited to, the major public universities of the NW and the DOE National Laboratories located in the region.:

- University of Washington
- University of Oregon
- University of Idaho
- Washington State University
- Oregon State University
- Oregon Health Sciences University
- Pacific Northwest National Laboratory
- Idaho National Environmental Engineering Laboratory

Performance Evaluation:

Outstanding: Identify and describe how two technologies and/or capabilities from northwest institutions might address one or more regional needs. The descriptions will include a characterization of the need and how the science and technology resource might be adapted to address the need.

Excellent: Identify and describe how a single technology or capability from northwest institutions might address a regional need.

Good: Identify potential science and technology solutions to at least one regional need.

Marginal: Develop a methodology that defines the process to be followed to identify and characterize potential science and technology solutions to regional needs.

Unsatisfactory: No progress.

3.2.2.2 Determine, or cause to be determined, the applicability of the identified potential science and technology solutions and identify and/or develop and utilize mechanisms for implementing them

The weight of this sub-indicator is 30%

Description: Simply identifying science and technology applicable to regional needs is always a necessary but rarely a sufficient condition to effect a solution to those needs. Just knowing that a possible technological response to a critical regional need is emerging from an R&D process

isn't the same as having a solution available for implementation. It may be that the technology will require significant time and money to mature or it may be that to be useful, the technology will have to be transferred to the commercial sector where it can be turned into a product that can be bought and installed. The intent of this indicator is to track progress made in preparing potential S&T solutions for further applied developmental research and/or commercialization.

Definition: Regional area - Included in the NW are Washington, Idaho, and Oregon Research Institutions – The list includes, but is not limited to, the major public universities of the NW and the DOE National Laboratories located in the region.:

- University of Washington
- University of Oregon
- University of Idaho
- Washington State University
- Oregon State University
- Oregon Health Sciences University
- Pacific Northwest National Laboratory
- Idaho National Environmental Engineering Laboratory

Assumptions: The Linking Regional Resources Group will be empowered to speak for or will obtain the proper involvement of their institutions in the disposition of their science and technology. The Linking Regional Resources Group will be able to achieve consensus on the rights of their institutions to "bundles" of technologies in which several institutions own different components of the science and technology assets, and funding from government and/or commercial sources will be available to implement the solutions.

Performance Evaluation:

Outstanding: A business plan or funding proposal will be prepared to advance the commercialization or further the development of an applicable technology or set of capabilities from one or more of the Northwest research institutions.

Excellent: Identify a mechanism to implement a science and technology solution that appears to address regional needs and that has the concurrence of the participating research institutions.

Good: Identify a set of generic mechanisms to implement science and technology solutions and obtain the concurrence of the regional research institutions with those mechanisms.

Marginal: Discuss the mechanisms that regional research institutions might adopt to implement science and technology solutions to regional needs.

Unsatisfactory: No progress.

3.2.2.3 Demonstrate the relationships established among the research institutions of the Northwest and the successes of this group in developing a process for and finding science and technology solutions to regional issues and needs

The weight of this sub-indicator is 35%

Description: As the activities of the Linking Regional Resources (LRR) Group expand and initial successes are achieved in identifying new technologies and capabilities and targeting them to meet regional needs, a concerted effort will be made to present the LRR process and accomplishments to organizations that have responsibilities for responding to regional issues

and needs. The intent is to increase visibility of the LRR and to work on regional issues of significant importance to the Northwest.

Definition: Regional area - Included in the NW are Washington, Idaho, and Oregon
Research Institutions – The list includes, but is not limited to, the major public universities of the NW and the DOE National Laboratories located in the region:

- University of Washington
- University of Oregon
- University of Idaho
- Washington State University
- Oregon State University
- Oregon Health Sciences University
- Pacific Northwest National Laboratory
- Idaho National Environmental Engineering Laboratory

Assumptions: The Linking Regional Resources Group will obtain the clearances needed to permit the development of presentations and publications for broad dissemination. The Linking Regional Resources Group will be able to achieve consensus on the messages to be delivered and the organizations to be targeted.

Performance Evaluation:

Outstanding:	Create a white paper and formal presentation describing the Linking Regional Resources program and its accomplishments. Present the results to one governmental and one non-governmental agency in one or more of the states of the region.
Excellent:	Create a white paper and formal presentation describing the Linking Regional Resources program and its accomplishments. Present the results in a public forum.
Good:	Create a white paper and formal presentation describing the Linking Regional Resources program and its accomplishments.
Marginal:	Obtain agreement from the members of the Linking Regional Resources group to prepare a white paper and formal presentation describing the program and its accomplishments.
Unsatisfactory:	No progress

3.2.3 Enhance the Laboratory's ability to generate revenues from commercialization for uses consistent with the mission of PNNL

The weight of this indicator is 20%.

Description: There are many ways in which the technology commercialization program provides value to the Lab, to DOE, to Battelle, and to our external customers. One of the primary objectives of the commercialization program is the generation of financial returns to Battelle and the Laboratory for reinvestment in facilities, equipment, people and technology. Through the active management of the DOE derived inventions and the execution of the Government Funded and Contractor Funded Technology Transfer programs, licensing opportunities will be pursued that will lead to the generation of licensing income. A significant portion of the income will be used for reinvestment in the laboratory. Increasing the amount of licensing income and thereby the amount of resources for reinvestment, is the basis for this performance indicator.

Definitions:

Contractor-funded technology transfer (CFTT): Electing to pursue a contractor-funded technology transfer pathway means the licensing manager must find Battelle resources to pay all or major portions of the patenting, marketing, and licensing, costs of the commercialization process. If the invention is successfully commercialized, the revenue is used to reimburse these investments and reward key contributors. A portion (51%) of the remaining funds are to be returned to the Laboratory for uses "consistent with the mission."

Government-funded technology transfer (GFTT): As an alternative to contractor-funded technology transfer efforts, the licensing manager can elect to use a government-funded technology transfer pathway. In this case, the funds used for patenting, marketing, licensing and all related activities are paid with DOE funds. Revenues from the commercialization of the invention, after sharing with key contributors, are to be returned to the Laboratory for uses "consistent with the mission."

Uses consistent with mission: Net income from commercialization will be utilized in a manner consistent with the mission and objective of the Laboratory. Planned use of these funds include but are not limited to technology transfer activities, intellectual property commercialization, laboratory outreach, educational endeavors, laboratory initiatives, and items consistent with the mission and objectives of the facility but unallowable under Contract DE-AC06-76RLO1830.

Assumptions:

1) Battelle and PNNL management make resources necessary to fund the Contractor Funded Technology Transfer program and the Government Funded Technology Transfer program available.

2) Provisions remain in the operating contract that provide for the technology commercialization program including CFTT and GFTT programs.

Performance Evaluation:

Outstanding:	Generation of licensing revenue from DOE derived inventions that exceed $900,000
Excellent:	Generation of licensing revenue from DOE derived inventions between $790,000 and $900,000
Good:	Generation of licensing revenue from DOE derived inventions between $675,000 and $790,000
Marginal:	Generation of licensing revenue from DOE derived inventions between $600,000 and $675,000
Unsatisfactory:	Generation of licensing revenue from DOE derived inventions of less than $600,000

3.3 Impact leadership and diversity in science and engineering education through Lab-sponsored programs for students and educators

The weight of this objective is 20%.

3.3.1 Impacts of Laboratory-sponsored programs for K-8 science education leaders

The weight of this indicator is 50%.

Description: This indicator measures the impact that a Laboratory-sponsored program, the Yakima Valley/Tri-Cities Leadership and Assistance for Education Reform (YV/TC LASER) Project has on the capacity of school district leadership teams (e.g., administrators, teachers, and community members) to initiate and implement their strategic plans for K-8 science education reform.

Assumptions: None

Performance Evaluation: This indicator will be measured through the use of a survey to be administered to LASER leadership teams from partner school districts from Yakima to Walla Walla. Surveys will gather information about the impact of the Lab's YV/TC LASER Project on the capacity of school district leadership teams to initiate and implement their strategic plans for K-8 science education reform. Three questions, using a four-point Likert Scale, will be used to determine impacts.

- LASER enabled our leadership team to "network" with other leadership teams in ways that built our capacity to initiate and implement our K-8 strategic plan for science education reform.
- LASER activities (e.g. presentations, workshops, etc.) built our capacity to implement our K-8 strategic plan for science education by enhancing our team's knowledge and skills.
- LASER fostered the development of action plans, which built our capacity to initiate and implement our science education reform effort.

For each participant's evaluation, the sum of the answers to the 3 questions is calculated (a total of 12 possible points).

Outstanding:	75% of participants' evaluations received have a sum of 10 or higher (out of a possible 12 points)
Excellent:	70% of participants' evaluations received have a sum of 9 or higher (out of a possible 12 points)
Good:	70% of participants' evaluations received have a sum of 8 or higher (out of a possible 12 points)
Marginal:	65% of participants' evaluations received have a sum of 7 or higher (out of a possible 12 points)
Unsatisfactory:	60% of participants' evaluations received have a sum of 6 or higher (out of a possible 12 points)

3.3.2 Enhanced diversity of the applicant pool for Laboratory-sponsored student programs

The weight of this indicator is 50%.

Description: This indicator utilizes the FY2002 baseline information on the diversity of student appointees, particularly those historically under-represented in science, technology, engineering and mathematics (STEM), to increase the diversity of students applying for project-funded fellowships.

Assumptions: None

Performance Evaluation: This indicator measures the diversity in the pool of applicants for PNNL project-funded fellowships:

- Baseline FY2002 data for diversity of the pool of completed applications.
- Visit universities/conferences with student populations the Laboratory desires to recruit.

Outstanding:	50% increase in # of diverse applicants
Excellent:	40% increase in # of diverse applicants
Good:	30% increase in # of diverse applicants
Marginal:	15% increase in # of diverse applicants
Unsatisfactory:	0% increase in # of diverse applicants

Based on the above targets, the percent increase in diverse students will be assigned a prorated value point rating between 0.0 and 4.0 based on the degree to which the goal is satisfied. The value points for this Performance Indicator will be entered into Table 3.1, weighted and rolled up to objective and outcome level. Adjectival ratings for this indicator will be determined in accordance with Table 3.4.

ELEMENT	Adjectival Rating	Value Points	Indicator Weight	Total Points	Objective Weight	Total Points
3.0 Leadership Excellence						
3.1 Attract, develop and retain the critical staff necessary to achieve simultaneous excellence in S&T, operations, and community trust						
3.1.1 Identify PNNL "best in class" workgroups by examining staff engagement assessment scores and objective performance data. Utilize this data to develop best practices training programs and talent profiles			100%			
			Objective 3.1 Total		30%	
3.2 Demonstrate the relevance of Pacific Northwest National Laboratory to the needs of the community and the region						
3.2.1 Support growth of the local and regional technology-based primary business sector (roll up from Table 3.2)			40%			
3.2.2 Document the success of the region's major research institutions in their collaboration to find science and technology solutions to regional needs (roll up from Table 3.3)			40%			
3.2.3 Enhance the Laboratory's ability to generate revenues from commercialization for uses consistent with the mission of PNNL			20%			
			Objective 3.2 Total		50%	
3.3 Impact leadership and diversity in science and engineering education through Lab-sponsored programs for students and educators						
3.3.1 Impacts of Laboratory-sponsored programs for K-8 science education leaders			50%			
3.3.2 Enhanced diversity of the applicant pool for Laboratory-sponsored student programs			50%			
			Objective 3.3 Total		20%	
					Critical Outcome 3.0 Total	

Table 3.1. Leadership Excellence Critical Outcome Performance Rating Development

ELEMENT	Adjectival Rating	Value Points	Weight	Weighted Score	Overall Weighted Score
3.2.1 Support growth of the local and regional technology-based primary business sector					
3.2.1.1 The number of new business and expansions in the local area where Battelle had a material role in their establishment			30%		
3.2.1.2 Effectiveness in providing technical assistance to local and regional firms			35%		
3.2.1.3 Develop and champion at least one new economic development initiative			35%		
				Overall Indicator 3.2.1 Total	

Table 3.2. Performance Indicator 3.2.1 Overall Score Calculation

ELEMENT	Adjectival Rating	Value Points	Weight	Weighted Score	Overall Weighted Score
3.2.2 Document the success of the region's major research institutions in their collaboration to find science and technology solutions to regional needs					
3.2.2.1 Find solutions to significant regional needs from the science and technology resources available in the Northwest's major research institutions			35%		
3.2.2.2 Determine, or cause to be determined, the applicability of the identified potential science and technology solutions and identify and/or develop and utilize mechanisms for implementing them			30%		
3.2.2.3 Demonstrate the relationships established among the research institutions of the Northwest and the successes of this group in developing a process for and finding science and technology solutions to regional issues and needs			35%		
				Overall Indicator 3.2.2 Total	

Table 3.3. Performance Indicator 3.2.2 Overall Score Calculation

Total Score	4.0 - 3.5	3.4 - 2.5	2.4 - 1.5	1.4 - 0.5	<0.5
Final Rating	Outstanding	Excellent	Good	Marginal	Unsatisfactory

Table 3.4. Leadership Excellence Critical Outcome Final Rating

III. CONTRACTOR SELF-ASSESSMENT PROGRAM

RL views the Contractor's self-assessment program as a primary tool to determine if it is accomplishing agreed-to outcomes, objectives and performance indicators, and is doing so in a manner that is acceptable. In addition, the Contractor utilizes self-assessment as a primary mechanism for evaluating the overall effectiveness of its organizations and to promote continuous improvement. The key to the performance-based evaluation process employed within the Laboratory is the utilization of self-assessment as a primary tool for evaluation of the Contractor. In order for this concept to continue to be successful DOE must diligently work with Contractor counterparts throughout each year to track the progress of the outcomes and objectives set forth within the Contract and/or the individual Directorate-level self-assessment plans. This regular interaction should be carried out under the principles of partnership and trust that form the basis of DOE's relationship with the Contractor.

Contractor Directorate-Level Self-Assessments
The Contractor shall develop and maintain Directorate-level self-assessment plans. Using the performance agreement as the basis, self-assessment plans are to be developed and maintained by each directorate, in cooperation with both their internal and external (PNNL Site Office, RL, or other) counterparts. These agreed upon plans are to be provided to the applicable DOE RL, PNNL Site Office, or other DOE customer within the first quarter of FY2003.

Contractor Laboratory-Level Self-Assessment Report
The Contractor is required to provide monthly and/or quarterly updates (as appropriate) on the performance against the performance agreement. The Contractor shall provide a formal status briefing at mid-year and year-end, and a formal self-evaluation report to the PNNL Site Office at year-end. Specific due dates for the above-mentioned briefings and reports shall to be agreed to by the Laboratory Director and the RL Associate Manager for Science & Technology.

In addition, the year-end report must provide:

- an overall summary of performance for FY2003,
- performance ratings for each outcome, objective, and indicator and the Laboratory overall, and
- a summary of key strengths and opportunities for improvement identified as part of the directorate self-assessment activities.