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

Section J

Appendix E

Performance Evaluation and Measurement Plan
APPENDIX E

STANDARDS OF PERFORMANCE-BASED FEE

FY 2005

BATTelle PERFORMANCE EVALuATION AND MEASUREMENT PLAN

for

Management and Operations of the

Pacific Northwest National Laboratory

Paul W. Kruger, Manager
Pacific Northwest Site Office

Date

7/24/05
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INTRODUCTION

This document describes the primary measurement basis for DOE’s Quality Assurance/Surveillance Plan (QASP) 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, 2004, through September 30, 2005. 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 mission and requirement performance expectations/objectives 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,” “Conditional Payment of Fee or Profit – Safeguarding Restricted Data and Other Classified Information” and “Total Available Fee: Base Fee Amount and Performance Fee Amount.” In partnership with the Contractor and other key customers, the Department of Energy (DOE) Headquarters (HQ) and the Pacific Northwest Site Office (PNSO) have defined the measurement basis that serves as the Contractor’s performance-based evaluation and fee determination.

The critical outcomes, objectives and set of performance indicators for each objective discussed herein were developed in accordance with contract requirements stated within Section C, 3.3 “Performance Objectives and Measures,” the performance expectations set forth within Section C, 3.2 “Performance Evaluation Expectations,” and the core expectations of the Contractor as called for within Section C, 3.1 “Core Expectations.” The performance indicators for meeting the Objectives set forth within this plan have been developed in coordination with HQ program offices as appropriate. Except as otherwise provided for within the contract, the evaluation and fee determination will rest solely on the Contractor’s performance within the Outcomes and Objectives set forth within this plan.

For FY 2005 the overall performance against each Objective of this performance plan, to include the evaluation of performance indicators identified for each Objective, shall be evaluated jointly by the appropriate HQ office or major customer and the PNSO. This cooperative review methodology will ensure that the overall evaluation of the Contractor results in a consolidated DOE position taking into account specific key indicators as well as all additional information not otherwise identified via specific indicators. The PNSO shall work closely with each HQ program office or major customer throughout the year in evaluating the Contractor’s performance and will provide observations regarding programs and projects as well as other management and operation activities conducted by the Contractor throughout the year.

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 each Critical Outcome, their corresponding Objectives, and performance indicators of performance identified, along with the weightings assigned to each Outcome and Objective and a table for calculating the final score for each Outcome.

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

The overall FY 2005 Battelle performance rating will be determined based on the weighted sum of the individual scores earned for each of the Outcomes described within this document and identified within Table A below. Performance evaluation shall be measured at the Objective level, which rollup to provide the performance evaluation determination for each Outcome. The rollup of the performance of each Outcome will then be utilized to determine the overall Contractor performance rating. The Final Score derived will be compared to the scale in Table B, below; to determine the overall Contractor adjective rating for FY 2005 and to Table C to determine the amount of performance-based fee earned, unless an adjustment to the fee and rating are deemed necessary based on the Performance Fee and Rating Adjustment Factor discussed later in this section. Each Critical Outcome is composed of two or more weighted Objectives and most Objectives have a set of performance indicators, which are identified to
assist the reviewer in determining the Contractor's overall performance in meeting that Objective. Each of
the performance indicators identifies significant activities, requirements, and/or milestones important to the
success of the corresponding Objective. The following describes the methodology for determining the
Contractor rating:

**Performance Evaluation Methodology:**
Each Objective within an Outcome shall be assigned earned value points, per Figure I-1 below, by the
evaluating office. Each evaluation will measure the degree of effectiveness and performance of the
Contractor in meeting the Objective and shall be based on the Contractors success in meeting the set of
performance indicators identified for each Objective as well as other performance information available to
the evaluating office from other sources as identified above. The set of performance indicators identified
for each Objective represent the set of significant indicators that if fully met, collectively places
performance for the Objective in the "outstanding" rating range.

<table>
<thead>
<tr>
<th>Adjective</th>
<th>Value Point</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outstanding Range</td>
<td>4.0 – 3.5</td>
<td>Significantly exceeds average standards of performance, achieves noteworthy results, accomplishes very difficult tasks in a timely manner.</td>
</tr>
<tr>
<td>Excellent Range</td>
<td>3.4 – 2.5</td>
<td>Exceeds average standards of performance, although there may be room for improvement in some elements; better performance in all other elements more than offsets this.</td>
</tr>
<tr>
<td>Good Range</td>
<td>2.4 – 1.5</td>
<td>Meets average standards of performance, assigned tasks are carried out in an acceptable manner; timely, efficient, and economical; deficiencies do not substantially affect performance.</td>
</tr>
<tr>
<td>Marginal Range</td>
<td>1.4 – 0.5</td>
<td>Below average standard of performance, deficiencies require management attention and corrective action.</td>
</tr>
<tr>
<td>Unsatisfactory Range</td>
<td>0.4 – 0</td>
<td>Significantly below average standard of performance, deficiencies are serious and urgently require senior management attention.</td>
</tr>
</tbody>
</table>

*Figure I-1. Adjectival Rating Definitions and Value Points*

**Calculating Individual Outcome Scores and Overall Contractor Score/Adjectival Rating:**
Each Objective is assigned earned value points by the evaluating office as stated above. The Outcome
rating is then computed by multiplying the value points by the weight of each Objective within an
Outcome. These values are then added together to develop an overall 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 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 FY 2005.

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 Contractor's overall adjectival rating as indicated in Table B and for see 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).
<table>
<thead>
<tr>
<th>Critical Outcome</th>
<th>Value Points</th>
<th>Adjectival Rating</th>
<th>Weight</th>
<th>Weighted Score</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 Quality of Science and Technology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.0 Programmatic Accomplishments That Advance DOE Missions And National Needs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.0 Constructing And Operating Research Facilities And Equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.0 Effectiveness And Efficiency Of Research Program Management And Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table A. FY 2005 Contractor Evaluation Score Calculation**

<table>
<thead>
<tr>
<th>Total Score</th>
<th>4.0 - 3.5</th>
<th>3.4 - 2.5</th>
<th>2.4 - 1.5</th>
<th>1.4 - 0.5</th>
<th>&lt;0.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Rating</td>
<td>Outstanding</td>
<td>Excellent</td>
<td>Good</td>
<td>Marginal</td>
<td>Unsatisfactory</td>
</tr>
</tbody>
</table>

**Table B. FY 2005 Contractor Adjectival Rating Scale**

**Determining the Amount of Performance-Based Fee Earned:**
The total performance-based fee earned is determined based on the final Contractor weighted score for FY 2005 as indicated within Table A above and then compared to Table C (or if required adjusted from Table D.).

<table>
<thead>
<tr>
<th>Overall Weighted Score from Table A.</th>
<th>Performance Rating</th>
<th>Percent of Fee Earned of $7,800,000.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>Outstanding</td>
<td>100%</td>
</tr>
<tr>
<td>3.9</td>
<td>Outstanding</td>
<td>100%</td>
</tr>
<tr>
<td>3.8</td>
<td>Outstanding</td>
<td>100%</td>
</tr>
<tr>
<td>3.7</td>
<td>Excellent</td>
<td>98%</td>
</tr>
<tr>
<td>3.6</td>
<td>Excellent</td>
<td>96%</td>
</tr>
<tr>
<td>3.5</td>
<td>Excellent</td>
<td>94%</td>
</tr>
<tr>
<td>3.4</td>
<td>Excellent</td>
<td>93%</td>
</tr>
<tr>
<td>3.3</td>
<td>Good</td>
<td>92%</td>
</tr>
<tr>
<td>3.2</td>
<td>Good</td>
<td>91%</td>
</tr>
<tr>
<td>3.1</td>
<td>Good</td>
<td>90%</td>
</tr>
<tr>
<td>3.0</td>
<td>Good</td>
<td>85%</td>
</tr>
<tr>
<td>2.9</td>
<td>Good</td>
<td>83%</td>
</tr>
<tr>
<td>2.8</td>
<td>Good</td>
<td>81%</td>
</tr>
<tr>
<td>2.7</td>
<td>Good</td>
<td>79%</td>
</tr>
<tr>
<td>2.6</td>
<td>Good</td>
<td>77%</td>
</tr>
<tr>
<td>2.5</td>
<td>Good</td>
<td>75%</td>
</tr>
<tr>
<td>2.4</td>
<td>Good</td>
<td>75%</td>
</tr>
<tr>
<td>2.3</td>
<td>Good</td>
<td>75%</td>
</tr>
<tr>
<td>2.2</td>
<td>Good</td>
<td>75%</td>
</tr>
<tr>
<td>2.1</td>
<td>Good</td>
<td>75%</td>
</tr>
<tr>
<td>2.0</td>
<td>Good</td>
<td>75%</td>
</tr>
<tr>
<td>1.9</td>
<td>Good</td>
<td>75%</td>
</tr>
<tr>
<td>1.8 to 1.5</td>
<td>Marginal</td>
<td>0%</td>
</tr>
<tr>
<td>1.4 to 0.5</td>
<td>Marginal</td>
<td>0%</td>
</tr>
<tr>
<td>0.4 to 0.0</td>
<td>Unsatisfactory</td>
<td>0%</td>
</tr>
</tbody>
</table>

**Table C. Performance-Based Fee Earned Scale**

J-E-3
Performance Fee and Rating Adjustment Factor:
The Performance Fee and Rating Adjustment Factor is the prescribed methodology that will be utilized by the Contracting Officer in determining the need for and amount of reductions in otherwise earned fee or rating based upon the lack of performance and/or specific events that occur during the evaluation period. The lack of performance indicators or objectives in this plan or Contractor self-assessment plans do not diminish the Contractor’s need to comply with all contractual requirements. Although the performance-based Critical Outcomes and their corresponding Objectives shall be the primary means utilized in determining the Contractor’s performance rating and amount of performance-based fee earned, the Contracting Officer may unilaterally adjust the rating and/or reduce the otherwise earned fee based on the Contractor’s performance against all contract requirements as set forth in the clauses entitled “Conditional Payment of Fee, Profit, or Incentives” and/or “Conditional Payment of Fee or Profit – Safeguarding Restricted Data and Other Classified Information.” Data to support rating and/or fee adjustments may be derived from other sources to include, but not limited to, the Contractor’s self-evaluation report, operational awareness (daily oversight) activities; “For Cause” reviews (if any); other outside agency reviews (OIG, GAO, DCAA, etc.), and the annual 2-week review (if needed).

The adjustment of the rating and/or reduction of otherwise earned fee will be determined by the severity of the performance failure (i.e., the degrees set forth by the policies described in Acquisition Regulation; Conditional Payment of Fee, Profit, and Other Incentives interim final rule published in 68 Fed. Reg. 68771, Dec. 10, 2003). In determining the amount of the reduction and the applicability of mitigating factors, the contracting officer must consider the contractor’s overall performance in meeting the performance requirements of the contract. Such consideration must include performance against any site specific performance criteria/requirements that provide additional definition, guidance for the amount of reduction, or guidance for the applicability of mitigating factors. In all cases, the contracting officer shall consider mitigating factors that may warrant a reduction below that which would otherwise be applicable (i.e., mitigating factors as described within Acquisition Regulation; Conditional Payment of Fee, Profit, and Other Incentives interim final rule published in 68 Fed. Reg. 68771, Dec. 10, 2003).

The Performance Fee and Rating Adjustment Factor (if required) will be calculated to reflect the percentage of otherwise earned fee to be paid following any warranted reductions. The Final Score will be applied to both the contractor rating and fee determination. The final performance fee earned, as determined through the Performance Fee and Rating Adjustment Factor shall be calculated by subtracting the percentage of fee reduction unilaterally determined by the Contracting Officer per the methodology described above from the percentage of fee earned, based on the overall Critical Outcome rating from Table A, and compared to Table C. (see Table D. below). The adjusted performance rating shall be determined by comparing the final percentage of fee earned (see Row 3 of Table D below) and comparing it to the performance rating ranges within Table C.

<table>
<thead>
<tr>
<th>Performance Adjustment Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent Fee Earned from Table C.</td>
</tr>
<tr>
<td>Percentage of Performance Adjustment</td>
</tr>
<tr>
<td>Final Percentage of Fee Earned</td>
</tr>
<tr>
<td>Final Performance Rating Awarded</td>
</tr>
</tbody>
</table>

Table D. Performance Adjustment Factor Calculation

Final Contractor Performance-based Rating and Year-end Final Report:
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
The current performance-based management approach to oversight within DOE has established a new culture within the Department with emphasis on the customer-supplier partnership between DOE and the laboratory contractors. It has also placed a greater focus on mission performance, best business practices, cost management, and improved contractor accountability. Under the performance-based management system the DOE provides clear direction to the laboratories and develops annual performance plans (such as this one) to assess the contractors' performance in meeting that direction in accordance with contract requirements. The DOE policy for implementing performance-based management includes the following guiding principles:

- Performance objectives are established in partnership with affected organizations and are directly aligned to the DOE strategic goals;
- Resource decisions and budget requests are tied to results;
- Primary reliance is placed upon self-assessments, with "for cause" reviews conducted only as needed; and
- Results are used for management information, establishing accountability, and driving long-term improvements.

In order for both the short and long-term ability of the Laboratory to contribute to DOE mission objectives and to provide high-value products and services to the DOE and other customers, DOE-HQ and the PNSO Manager, in partnership with the Contractor, have evaluated DOE and other customer needs and current operating environments to develop the Outcomes and Objectives set forth within this plan.

The performance-based 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 Objectives. The success of each Objective will be measured based on a set of performance indicators, both objective and subjective, that focus primarily on end-results or impact and not on processes or activities. Indicators provide specific evidence of performance, and collectively, they provide the body of evidence that indicates performance relative to Objectives. On occasion however, it may be necessary to include a process-oriented indicator when there is a need for the Contractor to develop a system or process that does not currently exist but will be of significant importance to the DOE and the Laboratory when completed.

Change Control

While the Outcomes, Objectives, and performance indicators described herein represent the current set of performance measures for the Contractor, they may require adjustments as prevailing scientific, and/or economic factors change. When this happens, the Objectives and the key performance indicators will be revised to move the Contractor/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 FY 2005 Performance Evaluation and Measurement Plan 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 PNSO 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 PNSO Manager and HQ Office of Science (SC). In addition 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 PEMP Administrator, at mail stop K-8-50. Contractor staff shall forward the change control form, with attachments, to the Laboratory PEMP Administrator, at mail stop K-1-50. 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 PNSO 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 or Objectives, the Contracting Officer shall have the unilateral right to change the performance plan in accordance with clause entitled “Standards of Contractor Performance Evaluation” within this contract.

Critical Outcomes, Objectives, and Key Performance Indicators

The following sections describe the Critical Outcomes, their supporting Objectives, and associated key performance indicators for FY 2005.
1.0 QUALITY OF SCIENCE AND TECHNOLOGY

Battelle produces high-quality, original, and creative results that advance science and technology; have sustained scientific progress and impact; receives appropriate external recognition; and contribute to U.S. leadership in international scientific and engineering communities.

The weight of this Outcome is 20%.

The Quality of Science and Technology Critical Outcome measures the overall effectiveness and performance of the Contractor in delivering science and technology results which contribute to and enhance the nation’s technology base; and are recognized by others as identified within the Objectives below.

Each Objective within this Outcome is to be assigned the appropriate earned value point by the evaluating office as described within Section I of this document. The Outcome rating is then computed by multiplying the value points by the weight of each Objective within an Outcome. Each Objective has one or more key indicators, the outcomes of which collectively assist the evaluating office in determining the Contractor’s overall performance in meeting that Objective. Each of the key indicators identifies significant tasks, activities, requirements, accomplishments, and/or milestones important to the success of the corresponding Objective. Although other performance information available to the evaluating office from other sources may be used, the outcomes of key indicators identified for each Objective shall be the primary means of determining the Contractor’s success in meeting an Objective. The overall Outcome score is computed by multiplying value points earned by the weight of each Objective, and summing them (see Table 1.1 at the end of this section). The overall value points earned (score) is then compared to Table 1.2 to determine the Outcome adjectival rating.

Objectives and Key Performance Indicators:

1.1 Validate the Quality and Impact of Science and Technology Outcomes in Delivering Science-Based Solutions Through External Recognition and Review

In measuring the performance of this Objective the DOE evaluator(s) shall consider the following:

- The quality and impact of accomplishments and products as validated by results of internal and external peer and program reviews;
- Future direction guidance resulting from peer and other reviews;
- Recognition by relevant external audiences of science and technology results; and
- Comparison with benchmark data from other laboratories.

The overall effectiveness/performance of the following set of key indicators (tasks, activities, requirements, accomplishments, and/or milestones) shall be utilized by evaluators as the primary measure of the Contractor’s success in meeting this Objective and for determining the value points awarded. The evaluation of this Objective may also consider other tasks, activities, requirements, accomplishments, and/or milestones not otherwise identified below that provide evidence to the effectiveness/performance of the Contractor in meeting this Objective. The weight of this Objective is 40%.

1.1a Peer-reviewed publications quality and impact

1.1b Optimize and Maximize the Impact of the peer-reviewed publication culture at PNNL.

1.1c Awards and recognition received by Laboratory staff: FY 2005 target - weighted score of 150+

1.1d Demonstrate the support and use of strong technical peer review processes to maintain the quality of R&D programs and processes.

1.1e Invention disclosure reports generated by Laboratory staff; FY 2005 target - 200

1.1f U.S granted patents filed at the USPTO; FY2005 target – 45
1.2 Create, Enhance, and Sustain New Scientific and Technological Knowledge and Capabilities

In measuring the performance of this objective, the DOE evaluator(s) shall determine the Contractor's performance by: 1) evaluating 1.2a – 1.2k progress against their initiative plans (or project proposals when no initiative plan is available), and 2) considering the feedback from formal advisory committee reviews. The evaluation will primarily use information generated through the Contractor's normal management process, and it will focus on the Contractor's level of success in creating new ideas or creating enhanced or new capabilities.

The overall effectiveness/performance of the following set of key indicators (tasks, activities, requirements, accomplishments, and/or milestones) shall be utilized by evaluators as the primary measure of the Contractor's success in meeting this Objective and for determining the value points awarded. The evaluation of this Objective may also consider other tasks, activities, requirements, accomplishments, and/or milestones not otherwise identified below but that provide evidence to the effectiveness/performance of the Contractor in meeting this Objective. The weight of this Objective is 60%.

1.2a Biomolecular Science Initiative
1.2b Homeland Security Initiative
1.2c Computational Science and Engineering Initiative
1.2d Nanoscience and Technology Initiative
1.2e Laboratory Fellows Research
1.2f Hydrogen Initiative
1.2g Catalysis Initiative
1.2h Materials Discovery for Radiation Detection Initiative
1.2i Environmental Biomarkers Initiative
1.2j Biobased Products & Fuels Initiative
1.2k Predictive Biology Initiative
<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>Adjectival Rating</th>
<th>Value Points</th>
<th>Objective Weight</th>
<th>Total Points</th>
<th>Total Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 Quality of Science and Technology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 Validate the Quality and Impact of Science and Technology Outcomes in Delivering Science-Based Solutions Through External Recognition and Review</td>
<td></td>
<td></td>
<td>40%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2 Create, Enhance, and Sustain New Scientific and Technological Knowledge and Capabilities</td>
<td></td>
<td></td>
<td>60%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Critical Outcome 1.0 Total</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Table 1.1 – 1.0 Critical Outcome Performance Rating Development

<table>
<thead>
<tr>
<th>Total Score</th>
<th>4.0 - 3.5</th>
<th>3.4 - 2.5</th>
<th>2.4 - 1.5</th>
<th>1.4 - 0.5</th>
<th>&lt;0.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Rating</td>
<td>Outstanding</td>
<td>Excellent</td>
<td>Good</td>
<td>Marginal</td>
<td>Unsatisfactory</td>
</tr>
</tbody>
</table>

Table 1.2 – 1.0 Critical Outcome Final Rating
2.0 PROGRAMMATIC ACCOMPLISHMENTS THAT ADVANCE DOE MISSIONS AND NATIONAL NEEDS

Battelle’s research and development results advance DOE missions and other national programs, have broad and significant value, and contribute to U.S. leadership in international scientific and technical communities.

The weight of this Outcome is 35%.

The Programmatic Accomplishments That Advance DOE Missions And National Needs Critical Outcome shall measure the overall effectiveness and performance of the Contractor in producing programmatic outcomes that advance DOE or other major customer missions and add to scientific and technological knowledge. Performance objectives for each of the primary program offices of the Laboratory make up this outcome and a set of key performance indicators to assist in the evaluation of the accomplishments toward DOE mission objectives/goals and national needs have been developed by the PNSO in partnership with the appropriate DOE HQ or other major customer organizations, and the Contractor.

Each Objective within this Outcome is to be assigned the appropriate earned value point by the evaluating office as described within Section 1 of this document. The Outcome rating is then computed by multiplying the value points by the weight of each Objective within an Outcome. Each Objective has one or more key indicators, the outcomes of which collectively assist the evaluating office in determining the Contractor’s overall performance in meeting that Objective. Each of the key indicators identifies significant tasks, activities, requirements, accomplishments, and/or milestones important to the success of the corresponding Objective. Although other performance information available to the evaluating office from other sources may be used, the outcomes of key indicators identified for each Objective shall be the primary means of determining the Contractor’s success in meeting an Objective. The overall Outcome score is computed by multiplying value points earned by the weight of each Objective, and summing them (see Table 2.1 at the end of this section). The overall value points earned (score) is then compared to Table 2.2 to determine the Outcome adjetival rating.

Objectives and Key Performance Indicators:

2.1 Produce Science and Technology Accomplishments that Advance Office of Science (SC) Program Objectives and Goals.

In measuring the performance of this Objective the SC evaluator(s) shall consider the following:
• Quality of research plans that ensure technical risks are adequately considered;
• Success in meeting budget projections and milestones;
• The effectiveness of decision-making in managing and redirecting projects and in identifying and 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;
• The degree to which customer and stakeholder expectations for program management are met;
• The program's track record of success in making scientific discoveries of technological importance to DOE missions and U.S. industry;
• Program accomplishments and its significance or impact;
• Where appropriate, the degree of industrial interest, participation, and support in follow-on development of current research results; and
• The value of successfully developing pre-commercial technology, to DOE, other federal agencies, and the national economy.

The overall effectiveness/performance of the following set of key indicators (tasks, activities, requirements, accomplishments, and/or milestones) shall be utilized by evaluators as the primary measure of the Contractor's success in meeting this objective and for determining the value points awarded. The evaluation of this Objective may also consider other tasks, activities, requirements,
accomplishments, and/or milestones not otherwise identified below but that provide evidence to the
effectiveness/performance of the Contractor in meeting this Objective. The weight of this Objective is
30%.

SC Objective: Tap the power of genomics and microbial systems for solutions to our nation’s
energy and environmental challenges
2.1a Decode and compare the genetic instructions of the diverse microorganisms by unraveling their
DNA sequences to reveal their capabilities for energy production, carbon sequestration, and
environmental cleanup.
2.1b Discover the molecular machines encoded in each microbe’s genetic instructions, determining
what molecular machines are present, what proteins they are made of, where they are found in
the cells, and how they do their work.
2.1c Examine genetic regulatory networks to understand the genetic circuitry in a cell that controls
the molecular machines.
2.1d Explore the biochemical capabilities of complex microbial communities to fully utilize the
potential found in natural microbial communities.

SC Objective: Unravel the mysteries of the Earth’s changing climate and protect our living
planet
2.1e Determine the effects of clouds and aerosols on climate, in particular their interactions with
long-wave radiation, how and where clouds form and dissipate in the atmosphere, and how
changes in clouds and aerosols distributions alter the Earth’s radiation balance.
2.1f Predict future climate at regional scales and develop methods for understanding the effects of
climate variability and change on human activities and critical natural resources such as water
resources.
2.1g Develop and test new methods for improving the ability of climate models to simulate radiative
forcing due to changes in greenhouse gases and aerosols in the atmosphere.
2.1h Understand and enhance natural processes for sequestering atmospheric carbon from fossil fuel
use in terrestrial ecosystems, particularly plants and soils.
2.1i Predict and assess the effects of climate change based on models of human actions and costs and
benefits of alternatives for mitigation and adaptation.

SC Objective: Understand the complex physical, chemical, and biological properties of
contaminated sites for new solutions to environmental remediation
2.1j Predict the fate and transport of contaminants with improved tools and understanding of
interdependent biological, chemical and physical processes.
2.1k Take laboratory experiments and theory to the field, testing our theoretical predictions and
models of the complex natural environmental over considerable distances and time scales.
2.1l Develop a basic understanding of complex chemical behavior of stored radioactive wastes to
enable the discovery of novel separations and other treatment methods that can dramatically
reduce the costs and risks of radioactive waste treatment and disposal.

SC Objective: Advance the basic sciences for energy independence
2.1m Advance the core disciplines of the basic energy sciences, producing transformational
breakthroughs in materials science, chemistry, and geosciences.
2.1n Advance the nanoscale science revolution, delivering the foundations and discoveries for a
future built around controlled chemical processes and materials designed one atom at a time or
through self-assembly.
2.1o Master the control of energy-relevant complex systems that exhibit multiscale collective
behavior that cannot be described as the sum of their parts.

Science-Driven High-Performance Computing
2.1p Development of the S&T Agenda for data intensive computing and analytics.
2.1q Establish the scientific agenda for multi-scale mathematics as it applies to the mission of the
Office of Science.
2.1r Establish network research activities and utilize the UltraScienceNet network.
2.2 Produce Science and Technology Accomplishments that Advance Office of Defense Nuclear Nonproliferation (DNN) Program Objectives and Goals.

In measuring the performance of this Objective the DNN evaluator(s) shall consider the following:
- Quality of research plans that ensure technical risks are adequately considered;
- Success in meeting budget projections and milestones;
- The effectiveness of decision-making in managing and redirecting projects and in identifying and 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;
- The degree to which customer and stakeholder expectations for program management are met;
- The program’s track record of success in making scientific discoveries of technological importance to DOE missions and U.S. industry;
- Program accomplishments and its significance or impact;
- Where appropriate, the degree of industrial interest, participation, and support in follow-on development of current research results; and
- The value of successfully developing pre-commercial technology, to DOE, other federal agencies, and the national economy.

The overall effectiveness/performance of the following set of key indicators (tasks, activities, requirements, accomplishments, and/or milestones) shall be utilized by evaluators as the primary measure of the Contractor’s success in meeting this objective and for determining the value points awarded. The evaluation of this Objective may also consider other tasks, activities, requirements, accomplishments, and/or milestones not otherwise identified below but that provide evidence to the effectiveness/performance of the Contractor in meeting this Objective. The weight of this Objective is 20%.

Office of Global Threat Reduction (NA-21)
2.2a Provide technical expertise and project support to complete planned security upgrades at a cumulative lifecycle total of 68 sites where materials are at risk.

Office of Nonproliferation Research and Engineering (NA-22)
2.2b Evaluate advanced one sensor technology against key proliferation signatures (through laboratory and field demonstrations or delivered to users) to improve the U.S. ability to detect early stages of nuclear weapons programs.
2.2c Utilize 20 opportunities to advance the state of Science and Technology by development of professional papers, technical presentations, and participate in symposiums and other fora.

Office of Nonproliferation and International-Security (NA-24)
2.2d Evaluate one safeguards technology for nonproliferation monitoring/verification and complete all necessary activities to prepare for one field trial of technology.

Office of International material Protection and Cooperation (NA-25)
2.2e Conduct twenty HAMMER-based training courses to domestic and international border guards and customs officials.

Office of Fissile Materials Disposition (NA-26)
2.2f Complete the “Nuclear Safety Rules for Nuclear Fuel Cycle Facilities”, in form approved and ready for public comment within Russia, the final step before regulation can be finalized and issued.

2.3 Produce Science and Technology Accomplishments that Advance Energy Cluster (EC) Program Objectives and Goals.

In measuring the performance of this Objective the EC evaluator(s) shall consider the following:
- Quality of research plans that ensure technical risks are adequately considered;
• Success in meeting budget projections and milestones;
• The effectiveness of decision-making in managing and redirecting projects and in identifying and 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;
• The degree to which customer and stakeholder expectations for program management are met;
• The program's track record of success in making scientific discoveries of technological importance to DOE missions and U.S. industry;
• Program accomplishments and its significance or impact;
• Where appropriate, the degree of industrial interest, participation, and support in follow-on development of current research results; and
• The value of successfully developing pre-commercial technology, to DOE, other federal agencies, and the national economy.

The overall effectiveness/performance of the following set of key indicators (tasks, activities, requirements, accomplishments, and/or milestones) shall be utilized by evaluators as the primary measure of the Contractor's success in meeting this objective and for determining the value points awarded. The evaluation of this Objective may also consider other tasks, activities, requirements, accomplishments, and/or milestones not otherwise identified below but that provide evidence to the effectiveness/performance of the Contractor in meeting this Objective. The weight of this Objective is 10%.

Office of Energy Efficiency and Renewable Energy (EERE)
2.3a Expand Bio-based Products by exploring scientific and technological solutions that transform agricultural byproducts into high-value chemicals and products.
2.3b Advance successful transition to a hydrogen economy by applying policy and analysis expertise and scientific capabilities.
2.3c Advance organic light emitting device (OLED) technology by developing novel wide bandgap host materials for use in ultraviolet OLEDs.
2.3d Enable reduced fuel consumption and emissions through the development of advanced technologies for transportation.
2.3e Form collaborative arrangements with other DOE laboratories and industry groups to develop new programs and develop technology roadmaps in support of new programs and/or to obtain industry validation for ongoing or new programs.

Office of Fossil Energy (FE)
2.3f Advance science and technology supporting development of the next generation of high-efficiency, low-cost zero emission power generation and the management of greenhouse gases.

Office of Electric Transmission and Distribution (OETD)
2.3g Lead energy system transformation into one that is intelligent, reliable and secure through the development and application of information and energy technologies.

2.4 Produce Science and Technology Accomplishments that Advance Department of Homeland Security (DHS) Program Objectives and Goals.

In measuring the performance of this Objective the DHS evaluator(s) shall consider the following:
• Quality of research plans that ensure technical risks are adequately considered;
• Success in meeting budget projections and milestones;
• The effectiveness of decision-making in managing and redirecting projects and in identifying and 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;
• The degree to which customer and stakeholder expectations for program management are met;
• The program's track record of success in making scientific discoveries of technological importance to DOE missions and U.S. industry;
• Program accomplishments and its significance or impact;
• Where appropriate, the degree of industrial interest, participation, and support in follow-on
development of current research results; and
• The value of successfully developing pre-commercial technology, to DOE, other federal agencies,
and the national economy.

The overall effectiveness/performance of the following set of key indicators (tasks, activities,
requirements, accomplishments, and/or milestones) shall be utilized by evaluators as the primary
measure of the Contractor’s success in meeting this objective and for determining the value points
awarded. The evaluation of this Objective may also consider other tasks, activities, requirements,
accomplishments, and/or milestones not otherwise identified below but that provide evidence to the
effectiveness/performance of the Contractor in meeting this Objective. The weight of this Objective is
15%.

2.4a Deploy radiation portal monitors at a number of sites as allowed by congressional funding.
2.4b Initiate discussions on the National Aquatic Protection Center.
2.4c Demonstrate a pre-commercial prototype of botulinum toxin detection system.

2.5 Produce Science and Technology Accomplishments that Advance Office of Environmental
Management (EM) Program Objectives and Goals.

In measuring the performance of this Objective the EM evaluator(s) shall consider the following:
• Quality of research plans that ensure technical risks are adequately considered;
• Success in meeting budget projections and milestones;
• The effectiveness of decision-making in managing and redirecting projects and in identifying and
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;
• The degree to which customer and stakeholder expectations for program management are met;
• The program’s track record of success in making scientific discoveries of technological importance
to DOE missions and U.S. industry;
• Program accomplishments and its significance or impact;
• Where appropriate, the degree of industrial interest, participation, and support in follow-on
development of current research results; and
• The value of successfully developing pre-commercial technology, to DOE, other federal agencies,
and the national economy.

The overall effectiveness/performance of the following set of key indicators (tasks, activities,
requirements, accomplishments, and/or milestones) shall be utilized by evaluators as the primary
measure of the Contractor’s success in meeting this objective and for determining the value points
awarded. The evaluation of this Objective may also consider other tasks, activities, requirements,
accomplishments, and/or milestones not otherwise identified below but that provide evidence to the
effectiveness/performance of the Contractor in meeting this Objective. The weight of this Objective is
10%.

2.5a Develop the technical basis for Pulse-Jet Mixer designs for the Hanford Waste Treatment Plant.
2.5b Use the Laboratory environmental modeling expertise to predict potential exposures from waste
remaining at Hanford for the Composite Analysis, a key FY 2005 deliverable required to renew
the disposal authorization for low level radioactive waste on the site.
2.5c Support the K-Basin Decontamination and Decommissioning Plan by completing the Hazard
Categorization of K-East Basin.
2.5d Complete testing to determine the fate of technetium in Bulk Vitrification matrices.
2.5e Conduct toxicological health risk assessments of headspace in Hanford Tanks, developing
documented database of chemicals of potential concern, to help Hanford contractors enhance
their worker exposure monitoring programs.
2.6 Produce Science and Technology Accomplishments that Advance Office of Intelligence (IN) and Office of Counterintelligence (CN) Program Objectives and Goals.

In measuring the performance of this Objective the IN evaluator(s) shall consider the following:

- Quality of research plans that ensure technical risks are adequately considered;
- Success in meeting budget projections and milestones;
- The effectiveness of decision-making in managing and redirecting projects and in identifying and 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;
- The degree to which customer and stakeholder expectations for program management are met;
- The program's track record of success in making scientific discoveries of technological importance to DOE missions and U.S. industry;
- Program accomplishments and its significance or impact;
- Where appropriate, the degree of industrial interest, participation, and support in follow-on development of current research results; and
- The value of successfully developing pre-commercial technology, to DOE, other federal agencies, and the national economy.

The overall effectiveness/performance of the following set of key indicators (tasks, activities, requirements, accomplishments, and/or milestones) shall be utilized by evaluators as the primary measure of the Contractor's success in meeting this objective and for determining the value points awarded. The evaluation of this Objective may also consider other tasks, activities, requirements, accomplishments, and/or milestones not otherwise identified below but that provide evidence to the effectiveness/performance of the Contractor in meeting this Objective. The weight of this Objective is 15%.

Office of Intelligence (IN)

2.6a Through the Coastal MASINT Program, deliver a technical development plan to the client for an advanced CBW signatures collection/detection system in the marine environment.

2.6b Complete installation and all preparations for DOE/IN certification of a new SCIF at the Laboratory's Marine Research Operations (MRO) facility under the coastal MASINT Program to expand capabilities and connectivity in support of Intelligence Community needs.

Office of Counterintelligence (CN)

2.6c Provide appropriate level of CI relevant awareness information to 80% (complex-wide metric) of the NNSA/DOE personnel.

2.6d At least 55% (complex-wide metric) of all NNSA/DOE counterintelligence personnel will attend at least one DOE/NNSA counterintelligence or equivalent professional training course.

2.6e Conduct Counterintelligence Awareness education classes for 1300 (complex-wide metric) NNSA/DOE personnel.
<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>Adjectival Rating</th>
<th>Objective Weight</th>
<th>Total Points</th>
<th>Total Points</th>
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</thead>
<tbody>
<tr>
<td><strong>2.0 Programmatic Accomplishments That Advance DOE Missions And National Needs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1 Produce S&amp;T Accomplishments that Advance Office of Science (SC) Program Objectives and Goals.</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2 Produce S&amp;T Accomplishments that Advance Office of Defense Nuclear Nonproliferation (DNN) Program Objectives and Goals.</td>
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<td></td>
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</tr>
<tr>
<td>2.3 Produce S&amp;T Accomplishments that Advance Energy Cluster (EC) Program Objectives and Goals.</td>
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</tr>
<tr>
<td>2.4 Produce S&amp;T Accomplishments that Advance Department of Homeland Security (DHS) Program Objectives and Goals.</td>
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</tr>
<tr>
<td>2.5 Produce S&amp;T Accomplishments that Advance Office of Environmental Management (EM) Program Objectives and Goals.</td>
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<tr>
<td>2.6 Produce S&amp;T Accomplishments that Advance Office of Intelligence (IN) and Office of Counterintelligence (CN) Program Objectives and Goals.</td>
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</tbody>
</table>

**Critical Outcome 2.0 Total**

**Table 2.1 - 2.0 Critical Outcome Performance Rating Development**

<table>
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<tr>
<th>Total Score</th>
<th>4.0 - 3.5</th>
<th>3.4 - 2.5</th>
<th>2.4 - 1.5</th>
<th>1.4 - 0.5</th>
<th>&lt;0.5</th>
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</thead>
<tbody>
<tr>
<td>Final Rating</td>
<td>Outstanding</td>
<td>Excellent</td>
<td>Good</td>
<td>Marginal</td>
<td>Unsatisfactory</td>
</tr>
</tbody>
</table>

**Table 2.2 - 2.0 Critical Outcome Final Rating**
3.0 CONSTRUCTING AND OPERATING RESEARCH FACILITIES & EQUIPMENT

Battelle provides effective and efficient strategic planning for, operations of, and access to user and other Laboratory facilities, and is responsive to the user community.

The weight of this Outcome is 35%.

The Constructing and Operating Research Facilities & Equipment Critical Outcome shall measure the overall effectiveness and performance of the Contractor in delivering leading-edge facilities and equipment to ensure the required capabilities are present to meet today's and tomorrow's complex challenges. It also measures the Contractor's innovative operational and programmatic means for external scientists to add substantial value to their research by their utilization of EMSL and other research facilities and the Contractor's implementation of seamless management systems that protect Laboratory staff and DOE assets, while ensuring R&D resources are available for use to the maximum extent possible.

Each Objective within this Outcome is to be assigned the appropriate earned value point by the evaluating office as described within Section I of this document. The Outcome rating is then computed by multiplying the value points by the weight of each Objective within an Outcome. Each Objective has one or more key indicators, the outcomes of which collectively assist the evaluating office in determining the Contractor's overall performance in meeting that Objective. Each of the key indicators identifies significant tasks, activities, requirements, accomplishments, and/or milestones important to the success of the corresponding Objective. Although other performance information available to the evaluating office from other sources may be used, the outcomes of key indicators identified for each Objective shall be the primary means of determining the Contractor's success in meeting an Objective. The overall Outcome score is computed by multiplying value points earned by the weight of each Objective, and summing them (see Table 3.1 at the end of this section). The overall value points earned (score) is then compared to Table 3.2 to determine the Outcome adjectival rating.

Objectives and Key Performance Indicators:

3.1 Operate Research User Facilities and Equipment to Effectively Meet User Needs

In measuring the performance of this Objective the SC evaluator(s) shall consider the following:

- The overall effectiveness of strengthening EMSL leadership and management;
- The overall effectiveness of strengthening EMSL scientific reputation and impact;
- The overall effectiveness of enhancing EMSL infrastructure to enhance science.

The effectiveness/performance of the following set of key indicators shall be utilized by evaluators as the primary measure of the Contractor’s success in meeting this objective and for determining the value points awarded. The evaluation of this Objective may also consider other tasks, activities, requirements, accomplishments, and/or milestones not otherwise identified below but that provide evidence to the effectiveness/performance of the Contractor in meeting this Objective. The weight of this Objective is 25%.

3.1a Strengthen EMSL Leadership
3.1b Increased EMSL Scientific Reputation and Impact
3.1c Enhance EMSL Infrastructure to Enhance Science

3.2 Sustain Excellence in Operating, Maintaining, and Renewing the Facility Portfolio to Meet Laboratory Needs

In measuring the performance of this objective the DOE evaluator(s) shall consider the following:

- The management of real property assets to maintain effective operational safety, worker health, environmental protection and compliance, property preservation, and cost effectiveness while
meeting program missions, through effective facility utilization, maintenance and budget execution.

- The management of energy use and conservation practices;
- The maintenance and renewal of building systems, structures and components associated with the Laboratory's facility and land assets;
- The day-to-day management and utilization of space in the active portfolio;
- The effectiveness and efficiency in transitioning Laboratory facilities that are deemed excess to need, from active status to unoccupied-standby mode prior to final disposition.

The overall effectiveness/performance of the following set of key indicators (tasks, activities, requirements, accomplishments, and/or milestones) shall be utilized by evaluators as the primary measure of the Contractor's success in meeting this objective and for determining the value points awarded. The evaluation of this Objective may also consider other tasks, activities, requirements, accomplishments, and/or milestones not otherwise identified below but that provide evidence to the effectiveness/performance of the Contractor in meeting this Objective. The weight of this Objective is 15%.

3.2a Effective and efficient optimization of Office of Science facility utilization: Facilities Asset and Utilization Index (AUI), DOE O 430.1B
3.2b Effectiveness and efficiency of maintenance activities to maximize the operational life of Office of Science facility systems, structures, and components: Facilities Asset Condition Index (ACI), DOE O 430.1B
3.2c Maintenance and disposition Integrated Facilities and Infrastructure (IFI) Crosscut Budget execution: Facilities IFI Crosscut Budget Comparison, DOE O 430.1B
3.2d Effective execution of the goals within the Energy Performance Management Agreement.
3.2e Effective and efficient execution of the PNNL River Corridor Closure Contract (RCCC) Transition Plan and integration with the RCCC Contractor in alignment with the Transition Agreement.
3.2f Demonstrate effectiveness and efficiency in utilizing current space holdings.
3.2g Manage real property assets through performance based approaches to real property life-cycle asset management (10 Year Site Plan).

3.3 Acquire the Facilities and Infrastructure in support of Future Laboratory Programs

In measuring the performance of this objective the DOE evaluator(s) shall consider the following:

- Integration and alignment of the Ten Year Site Plan to the Laboratory's comprehensive strategic plan.
- The facility planning, forecasting, and acquisition for effective translation of business needs into comprehensive and integrated facility site plans. The effectiveness in producing quality site and facility planning documents as required;
- The involvement of relevant stakeholders in all appropriate aspects of facility planning and preparation of required documentation; and
- Overall responsiveness to customer mission needs.

The overall effectiveness/performance of the following set of key indicators (tasks, activities, requirements, accomplishments, and/or milestones) shall be utilized by evaluators as the primary measure of the Contractor's success in meeting this Objective and for determining the value points awarded. The evaluation of this Objective may also consider other tasks, activities, requirements, accomplishments, and/or milestones not otherwise identified below but that provide evidence to the effectiveness/performance of the Contractor in meeting this Objective. The weight of this Objective is 15%.

3.3a Key activities and requirements related to Critical Decision 1 (CD-1) for the 300 Area Capability Replacement Laboratory (CRL) are accomplished.
3.3b State Approval of BSEL Construction Funding is secured.
3.3c Facility planning, forecasting, and acquisition activities translate business needs and facility condition information into a comprehensive facility strategic plan for effective and efficient execution.
3.3d Deliver space that will effectively and efficiently meet near term mission needs consistent with the goals of the Ten Year Site Plan.
3.3e Demonstrate the Laboratory’s Internet bandwidth is improved to accommodate strategic research collaborations requiring extensive computation and transfer of large data sets.

3.4 Sustain Excellence and Enhance Effectiveness of Integrated Safety, Health, and Environmental Protection

In measuring the performance of this Objective the DOE evaluator(s) shall consider the following:

- The success in meeting ES&H goals;
- The commitment of leadership to strong ES&H performance is appropriately demonstrated;
- The maintenance and appropriate utilization of hazard identification, prevention, and control processes/activities;
- The efficiency and effectiveness of Contractor Leadership (including Corporate Office Leadership) in responding to ES&H incidents;
- The degree to which scientists and workers are involved and engaged in the ES&H program at the bench level; and
- The ability to monitor and analyze the effectiveness of ES&H systems, processes, and tools.

The overall effectiveness/performance of the following set of key indicators (tasks, activities, requirements, accomplishments, and/or milestones) shall be utilized by evaluators as the primary measure of the Contractor's success in meeting this objective and for determining the value points awarded. The evaluation of this Objective may also consider other tasks, activities, requirements, accomplishments, and/or milestones not otherwise identified below but that provide evidence to the effectiveness/performance of the Contractor in meeting this Objective. The weight of this Objective is 25%.

3.4a The number of incidents resulting from failure to appropriately recognize hazards has been reduced.
3.4b The Contractor’s progress in achieving and maintaining “best-in-class” ESH&Q program performance as measured by: DART, TRCR, environmental releases and third party registration.
3.4c A systematic performance measurement process is in place that demonstrates performance to the Core Functions and Guiding Principles of Integrated Safety Management.
3.4d Operational information is evaluated quarterly and factored into Lab decision making. Evaluate data streams (e.g., QPR, RPR, ORPS, Security, dashboard metrics, self assessments, audits, and surveillance) used by the Lab, for trends, issues and concerns that pose a risk to Lab operational stability.
3.4e An open reporting culture is maintained at the Laboratory while appropriately responding to ESH&Q incidents.
3.4f Staff demonstrates cognizance and engagement in the safety program.
3.4g The number of incident resulting from inadequate procedure content and use has been reduced.

3.5 Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM)

In measuring the performance of this Objective the DOE evaluator(s) shall consider the following:

- The Laboratory’s success in meeting Safeguards and Security (SAS) goals and expectations.
• The commitment of leadership to strong SAS performance is appropriately demonstrated;
• Integration of Safeguards and Security into the culture of the organization for effective
deployment of the management system is demonstrated; and
• The maintenance and appropriate utilization of SAS risk identification, prevention, and control
processes/activities;

The Laboratory shall continue to utilize the ISSM framework to systematically integrate SAS into
management and work processes at all levels so that missions are accomplished securely. Line
management is directly responsible for the protection of DOE assets. They accept residual risk and
ensure appropriate controls are in place and verified prior to authorization of operations. Additionally,
each individual is directly responsible for following security requirements and contributing to secure
missions and workplaces.

The overall effectiveness/performance of the following set of key indicators (tasks, activities,
requirements, accomplishments, and/or milestones) shall be utilized by evaluators as the primary
measure of the Contractor's success in meeting this objective and for determining the value points
awarded (degree of success in meeting the objective). Performance by the line organizations shall
demonstrate the degree of integration and success of the ISSM program. The evaluation of this
objective may also consider other tasks, activities, requirements, accomplishments, and/or milestones
not otherwise identified below but that provide evidence to the effectiveness/performance of the
Contractor in meeting this objective.

It is important to note that exceeding the limits previously identified does not necessarily indicate
failure of the SAS program or unacceptable risk exposure. Exceeding the limit will serve as a flag to
draw increased attention to the specific details of the issues, and determine if the metric indicates
problems with SAS program implementation, or external influences that may precipitate changes in
our protection strategy.

The weight of this objective is 20%.

3.5a Security Events are reported and mitigated as necessary.
3.5b Demonstrate effective SAS systems through external reviews, surveys and inspections.
3.5c Complete corrective actions for SAS reviews in accordance with approved Corrective Action
Plans.
3.5d Employee and Management awareness of their SAS responsibilities.
3.5e Transfer of accountable nuclear inventory.
<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>Adjectival Rating</th>
<th>Value Points</th>
<th>Objective Weight</th>
<th>Total Points</th>
<th>Total Points</th>
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</thead>
<tbody>
<tr>
<td>3.0 Constructing And Operating Research Facilities &amp; Equipment</td>
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<tr>
<td>3.1 Operate Research User Facilities and Equipment to Effectively Meet User Needs</td>
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<tr>
<td>3.2 Sustain Excellence in Operating, Maintaining, and Renewing the Facility Portfolio to Meet Laboratory Needs</td>
<td></td>
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<tr>
<td>3.3 Acquire the Facilities and Infrastructure in support of Future Laboratory Programs</td>
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<tr>
<td>3.4 Sustain Excellence and Enhance Effectiveness of Integrated Safety, Health, and Environmental Protection</td>
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<tr>
<td>3.5 Sustain and Enhance the Effectiveness of Integrated Safeguards and Security (ISSM)</td>
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</tbody>
</table>

Table 3.1 – 3.0 Critical Outcome Performance Rating Development

<table>
<thead>
<tr>
<th>Total Score</th>
<th>4.0 - 3.5</th>
<th>3.4 - 2.5</th>
<th>2.4 - 1.5</th>
<th>1.4 - 0.5</th>
<th>&lt;0.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Rating</td>
<td>Outstanding</td>
<td>Excellent</td>
<td>Good</td>
<td>Marginal</td>
<td>Unsatisfactory</td>
</tr>
</tbody>
</table>

Table 3.2 – 3.0 Critical Outcome Final Rating

J-E-21
4.0 EFFECTIVENESS AND EFFICIENCY OF RESEARCH PROGRAM MANAGEMENT AND SUPPORT

Battelle provides effective program leadership; strategic planning and development of initiatives; provides outstanding expert-delivery and research processes, which improve research productivity; creates supporting partnerships/collaborations; recruits and retains a quality scientific workforce; and sustains efficient and effective business systems.

The weight of this Outcome is 10%.

The Effectiveness and Efficiency of Research Program Management and Support Critical Outcome shall measure the Contractor's overall leadership in executing programs. Dimensions of program management and support covered include: 1) creating & managing strong education programs in line with DOE goals for the furtherance of science, mathematics, and technology education; 2) strengthening the linkage between fundamental and applied sciences; 3) provision of efficient and effective business systems that are responsive to the needs of mission elements; and 4) effectiveness in enhancing research work processes, and providing strong program/project controls to improve scientific productivity.

Each Objective within this Outcome is to be assigned the appropriate earned value point by the evaluating office as described within Section I of this document. The Outcome rating is then computed by multiplying the value points by the weight of each Objective within an Outcome. Each Objective has one or more key indicators, the outcomes of which collectively assist the reviewing office in determining the Contractor's overall performance in meeting that Objective. Each of the key indicators identifies significant tasks, activities, requirements, accomplishments, and/or milestones important to the success of the corresponding Objective. Although other performance information available to the evaluating office from other sources may be used, the outcomes of key indicators identified for each Objective shall be the primary means of determining the Contractor's success in meeting an Objective. The overall Outcome score is computed by multiplying value points earned by the weight of each Objective, and summing them (see Table 4.1 at the end of this section). The overall value points earned (score) is then compared to Table 4.2 to determine the Outcome adjetival rating.

Objectives and Key Performance Indicators:

4.1 Demonstrate Effective Management Through Established Processes and Systems

In measuring the performance of this Objective the DOE evaluator(s) shall consider the following:

- Demonstration of an efficient and effective performance measurement system;
- Improvements made and their effects;
- The effectiveness of management processes and systems as validated by internal and external audits and reviews;
- The continual improvement of management processes and systems through the use of results of audits, review, and other information;
- The degree of knowledge and appropriate utilization of established system processes/procedures by Contractor management and staff; and
- The efficiency and effectiveness of Contractor Leadership (including Corporate Office Leadership) in responding to management processes and systems issues when identified.

The overall effectiveness/performance of the following set of key indicators (tasks, activities, requirements, accomplishments, and/or milestones) shall be utilized by evaluators as the primary measure of the Contractor's success in meeting this objective and for determining the value points awarded. The evaluation of this Objective may also consider other tasks, activities, requirements, accomplishments, and/or milestones not otherwise identified below but that provide evidence to the effectiveness/performance of the Contractor in meeting this Objective. The weight of this Objective is 100%.

J-E-22
4.1a The Laboratory demonstrates that it manages through the use of clearly defined core processes and management systems.

4.1b Performance measurement and analysis show the effectiveness of management systems and core business processes.

4.1c Key Lab-level issues and opportunities for improvement are being identified and systematically addressed, and improved performance is achieved (including: self-assessment, corrective action management, safety performance, management system delivery, procedural compliance, senior staff turnover, and laboratory strategy risk management, contract compliance, work authorization).
<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>Adjectival Rating</th>
<th>Value Points</th>
<th>Objective Weight</th>
<th>Total Points</th>
<th>Total Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0 Effectiveness And Efficiency Of Research Program Management and Support</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4.1 Demonstrate Effective Management Through Established Processes and Systems</td>
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<td>100%</td>
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<tr>
<td></td>
<td>Critical Outcome 4.0 Total</td>
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</tbody>
</table>

Table 4.1 - 4.0 Critical Outcome Performance Rating Development

<table>
<thead>
<tr>
<th>Total Score</th>
<th>4.0 - 3.5</th>
<th>3.4 - 2.5</th>
<th>2.4 - 1.5</th>
<th>1.4 - 0.5</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Final Rating</td>
<td>Outstanding</td>
<td>Excellent</td>
<td>Good</td>
<td>Marginal</td>
<td>Unsatisfactory</td>
</tr>
</tbody>
</table>

Table 4.2 - Research Management and Program Leadership Critical Outcome Final Rating