

|  |   |  |   |                      |
|--|---|--|---|----------------------|
| <b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>  |   |  | 1. CONTRACT ID CODE<br><b>DE-AC07-05ID14517</b> | PAGE 1 OF 3<br>PAGES |
| 2. AMENDMENT/MODIFICATION NO.<br><b>M093</b>   | 3. EFFECTIVE DATE<br><b>See Block 16c</b> | 4. REQUISITION/PURCHASE REQ. NO.<br><b>NOPR</b>  | 5. PROJECT NO. (If applicable)                  |                      |
| 6. ISSUED BY<br><b>US. Department of Energy<br/>Idaho Operations Office (DOE-ID)<br/>Contract Management Division<br/>1955 Fremont Avenue, MS 1240<br/>Idaho Falls, ID 83415</b> |   | 7. ADMINISTERED BY (If other than Item 6)<br><b>Diane Long, Contract Specialist<br/>(208) 526-0949</b> |   |                      |
| 8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and Zip Code)<br><b>Battelle Energy Alliance, LLC<br/>P.O. Box 1625<br/>Idaho Falls, ID 83415</b>                  |   | 9A. AMENDMENT OF SOLICITATION NO.  |   |                      |
| CODE   |   | 9B. DATED (SEE ITEM 11)  |   |                      |
| FACILITY CODE  |   | 10A. MODIFICATION OF CONTRACT/ORDER NO.<br><b>DE-AC07-05ID14517</b>                                    |   |                      |
|  |   | 10B. DATED (SEE ITEM 13)<br><b>November 9, 2004</b>  |   |                      |
| 11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS  |   |  |   |                      |

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers  is extended,  is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning \_\_\_\_\_ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

**N/A**

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS;  
IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

|          |   |
|----------|---|
|          | A. THIS CHANGE ORDER IS ISSUED PURSUANT TO (Specify authority):<br><br><b>THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.</b>  |
|          | B. THE ABOVE-NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (Such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b). |
| <b>X</b> | C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:<br><b>DEAR 970.5215-1, Total Available Fee: Base Fee Amount And Performance Fee Amount</b>   |
|          | D. OTHER (Specify type of modification and authority):  |

E. IMPORTANT: Contractor [ ] is not, [X] is required to sign this document and return [ 3 ] copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible)

The purpose of this modification is to incorporate changes to the FY 2008 Performance Evaluation Measurement Plan (PEMP) in Sections 1.1 & 1.2.

(See Continuation)

Except as provided herein, all terms and conditions of the document referenced in Items 9A or

10A, as heretofore changed, remains unchanged and in full force and effect.

|  |                                    |   |                                    |
|--|------------------------------------|---|------------------------------------|
| 15A. NAME AND TITLE OF SIGNER (Type or print)<br><b>Lisa A. Sehlke, Manager<br/>Prime Contracts and Performance Management</b> |                                    | 16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)<br><b>Michael L. Adams<br/>Contracting Officer</b> |                                    |
| 15B. CONTRACTOR/OFFEROR<br>BY <u>Lisa A. Sehlke</u><br>(Signature of person authorized to sign)                                | 15C. DATE SIGNED<br><u>1/15/08</u> | 16B. UNITED STATES OF AMERICA<br>BY <u>Michael L. Adams</u><br>(Signature of Contracting Officer)             | 16C. DATE SIGNED<br><u>1/17/08</u> |

Continuation page

The following changes are incorporated into the FY 2008, PEMP:

**1.1 Global Nuclear Energy Partnership (GNEP) Technical Integration Office (TIO)**

BEA's major responsibility as the GNEP TIO is to be the point of contact between DOE and the national laboratories for coordination, integration and reporting of the work being performed by participating national laboratories and industry. This includes integration of all Research and Development (R&D) and Technology Development (TD) activities necessary for effective GNEP execution; implementation of a project controls system meeting the requirements of DOE O 413.3A, where all GNEP Program financial and schedule data are collected, analyzed and integrated; cost and schedule reports issued, and an administrative function that will deal with activities such as Quality Assurance (QA), documentation and communications. The milestones for these objectives address full implementation of a Project Management and Controls System that includes a Planning/Work Package Generator, final draft Change Control Process submitted to DOE, Performance Measurement and Analysis, and an Integrated Master Schedule.

Major tasks for the GNEP TIO at INL in FY 2008 GNEP Work Packages include:

- Complete activities for the standup of the TIO, including implementation of an improved Work Package Generator, Work Breakdown Structure, Change Control Procedures, and Project Management Plans, GNEP Project Controls Policy Manual, and the TIO Operations Plan by December 31, 2007;
- Complete an integrated GNEP schedule by March 31, 2008, to include all Level 1 and Level 2 milestones;
- Provide financial and schedule analyses and trend interpretations to DOE for each month by the third week of the following month, beginning in December 2007. These reports will provide corrective action plans for activities with schedule or cost deviations from planned values by more than 10 percent;
- Develop and issue an INL GNEP QA Program Plan (QAPP) that is compliant with the GNEP Quality Assurance Program Document (QAPD) within 60 calendar days of GNEP QAPD approval by DOE-HQ;
- Complete assessments of GNEP performing organization QA document submittals required by the GNEP QAPD within 6 calendar months of GNEP QAPD approval by DOE-HQ;
- Integrate National Environmental Policy Act (NEPA) input from other national laboratories and provide support for the Secretarial 2008 decision as requested by the GNEP-HQ Program Office;
- Develop a GNEP Integrated Waste Management Strategy by March 31, 2008; and
- Complete development of Planning Packages for FY 2009 within five weeks after budget guidance is provided by the GNEP-HQ Program Office.

Work package milestone dates supersede the dates above in case of conflict. In determining the performance of this objective, the DOE evaluator(s) shall consider progress reports, Program

Office reviews/oversight, deliveries against milestone dates, etc. in accordance with the performance criteria in Table E, "Performance Criteria for Sections 1.1, 1.2, 1.3, and 1.4."

## 1.2 GNEP Program Performance

Execute major GNEP technical support activities and conduct effective R&D in support of the GNEP objectives. This includes successful support for the spent fuel recycle facility project, the advanced recycle reactor project, the Advanced Fuel Cycle Facility, and the Advanced Fuel Cycle (AFC) R&D program and mission. Key elements of focus in FY 2008 for the AFC R&D program include Advanced Fuel Cycle Initiative (AFCI) Fuels fabrication and irradiations, post-irradiation examination (PIE) equipment upgrade, and aqueous and electrochemical fuel reprocessing technology development.

Major tasks for the INL in FY 2008 GNEP Work Packages include:

- Complete technical input for the 2008 Secretarial Decision on the path forward for GNEP by March 31, 2008. The input shall include details on technical options including technology readiness and R&D needs for commercial deployment, assessment of cost competitiveness of GNEP technologies, a complete qualitative risk assessment, and technology options for risk mitigation;
- Successfully complete PIE equipment upgrade such that all equipment is installed and operating in conformity with the schedule in the Project Execution Plan;
- Complete fabrication of fuel rodlets containing minor actinides for the AFC-2C and AFC-2D oxide fuel tests by September 30, 2008 (contingent upon shipment of fuel pellets from Los Alamos National Laboratory (LANL) by February 29, 2008);
- Demonstrate the electrolytic reduction of irradiated MOX fuel by September 30, 2008;
- Provide a cost and schedule estimate by March 31, 2008, for potential Transient Reactor Experiment and Test (TREAT) restart;
- Provide a letter report summarizing the domestic and international options for fabricating the startup fuel by February 4, 2008.

Work package milestone dates supersede the dates above in case of conflict. In determining the performance of this objective, the DOE evaluator(s) shall consider progress reports, Program Office reviews/oversight, deliveries against milestone dates, etc. in accordance with the performance criteria in Table E, "Performance Criteria for Sections 1.1, 1.2, 1.3, and 1.4."

The FY 2008, PEMP dated 1/08/2007 revision 1 is deleted in its entirety and replaced with the attached, revision 2 FY 2008 PEMP effective date: 1/11/08 and incorporated as Part III Section J Attach K, (Attached 23 pages)

ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED.

**FY 2008 INL Performance Evaluation Measurement Plan**  
**1/11/08 Rev. 2**

**Section A**

**I. Introduction:**

This contract attachment sets forth the Performance Evaluation Measurement Plan (PEMP) that will be used by the Department of Energy (DOE) to evaluate the performance of Battelle Energy Alliance, LLC (BEA) for the management and operation of the Idaho National Laboratory (INL) in Fiscal Year (FY) 2008.

The FY 2008 INL PEMP will focus on two Critical Outcomes. These are: **Nuclear Energy Programs** and **Site Operations**. The two are equally valued at 50 percent of the total fee pool. This is a departure from previous years in that it places emphasis on the objectives of the Office of Nuclear Energy and on those critical few Site Operations issues that are urgent and essential to the success of the site and must be largely accomplished in FY 2008. **However, the PEMP focus for FY 2008 does not change the DOE Vision for the INL (in Section C of the contract) and does not under value the expectation of satisfactory performance levels in other areas of the statement of work.**

**II. Critical Outcomes, Objectives, and Measures:**

The INL PEMP defines critical outcomes and associated objectives and then uses those objectives to assess the contractor's performance in accordance with contract requirements. The success of each objective within each critical outcome will be measured based on a set of key performance measures, both objective and subjective, which focus primarily on end-results and impact; not on processes and activities.

Measures are developed for each objective. Measures identify significant activities, requirements, and/or milestones important to the success of the corresponding objective and critical outcome and are utilized as the primary means of determining the contractor's success in meeting the desired performance result. Measures are developed to indicate that, if fully met, the performance level is equivalent to a "B+" grade. In order to achieve any given grade, all of the requirements of the lower grades must have been met. Grades above "B+" will require accomplishment above the expectation of DOE in setting forth the objectives.

**III. Definitions:**

**Critical Outcome:** An overarching statement of the desired outcome for each major performance area that is scored and reported under the appraisal process. The INL critical outcomes are based on the DOE strategic plans.

**Customer Satisfaction/Feedback:** Customer satisfaction/feedback will be determined by a formal, DOE-approved customer feedback survey.

**Level 1 and 2 Milestones:** Work package milestones that have been agreed upon by INL and DOE and are included for reporting purposes in the Program Information Collection System (PICS).

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**Objectives:** Desired accomplishment or results that contribute substantially to a critical outcome. Fully meeting stated objectives will normally result in a grade of “B+.”

**Peer Review:** Independent scrutiny/evaluation of a project or program by qualified internal/external scientific experts (peers). Common criteria for peer review encompass questions like:

- Validity – are the research results credible; are the design and methodology appropriate?
- Significance - is it an important finding?
- Originality - are the results new?
- Does the work reflect awareness of and does it refer properly to work done by others?

An outstanding rating by a peer panel would be when all the (peer) reviewers agree that the answers to all of the above and similar questions are unambiguously yes.

**Performance Measure:** A quantitative or qualitative method for characterizing performance to assist the reviewer in assessing achievement of the corresponding performance objective (i.e., what you would measure). It may include a description of the desired condition, milestone, or target level of achievement. Absence of a performance measure does not diminish the requirement for contractor compliance with specified contractual requirements. Failure to meet a significant contractual requirement may result in the Contracting Officer overriding the performance measures.

**Table A. General Letter Grade and Numerical Score Definitions**

| <b>Letter Grade</b> | <b>Numeric Grade</b> | <b>Definition</b>   |
|---------------------|----------------------|---|
| A+                  | 4.3 – 4.1            | Significantly exceeds expectations of performance as set within performance measures identified for each objective or within other areas within the purview of the objective. Areas of notable performance have or have the potential to significantly improved the overall mission of the laboratory. No specific deficiency noted within the purview of the overall objective being evaluated.  |
| A                   | 4.0 – 3.8            | Notably exceeds expectations of performance as set within performance measures identified for each objective or within other areas within the purview of the objective. Areas of notable performance either have or have the potential to improve the overall mission of the Laboratory. Minor deficiencies noted are more than offset by the positive performance within the purview of the overall objective being evaluated and have no potential to adversely impact the mission of the Laboratory. |
| A-                  | 3.7 – 3.5            | Meets expectations of performance as set within performance measures identified for each objective with some notable areas of increased performance identified. Deficiencies noted are offset by the positive performance within the purview of the overall objective being evaluated with little or no potential to adversely impact the mission of the Laboratory.  |
| B+                  | 3.4 – 3.1            | Meets expectations of performance as set by the performance measures identified for each objective with no notable areas of increased or diminished performance identified. Minor deficiencies identified are offset by other   |

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| <b>Letter Grade</b> | <b>Numeric Grade</b> | <b>Definition</b>   |
|---------------------|----------------------|---|
|                     |                      | exceptional performance and have little to no potential to adversely impact the mission of the Laboratory.  |
| B                   | 3.0 – 2.8            | Most expectations of performance as set by the performance measures identified for each objective are met. Performance that does not meet expectations are identified but are offset by positive performance within the purview of the objective and have little to no potential to adversely impact the mission of the Laboratory. |
| B-                  | 2.7 – 2.5            | One or two expectations of performance set by the performance measures are not met and/or other deficiencies are identified and although they may be offset by other positive performance, they may have the potential to negatively impact the objective or overall laboratory mission accomplishment.                             |
| C+                  | 2.4 – 2.1            | Some expectations of performance set by the performance measures are not met and/or other minor deficiencies are identified, and although they may be offset by other positive performance, they may have the potential to negatively impact the objective or overall laboratory mission accomplishment.                            |
| C                   | 2.0 – 1.8            | A number of expectations as set by the performance measures are not met and/or a number of other deficiencies are identified and although they may be somewhat offset by other positive performance, they have the potential to negatively impact the objective or overall laboratory mission accomplishment.                       |
| C-                  | 1.7 – 1.1            | Most expectations as set by the performance measures are not met, and/or other major deficiencies are identified that have or will negatively impact the objective or overall laboratory mission accomplishment if not immediately corrected.   |
| D                   | 1.0 – 0.8            | Most or all expectations as set by the performance measures are not met, and/or other significant deficiencies are identified which have negatively impacted the objective and/or overall Laboratory mission accomplishment.  |
| F                   | 0.7 – 0              | All expectations as set by the performance measures are not met and/or other significant deficiencies are identified that have significantly impacted both the objective and the accomplishment of the laboratory mission.  |

#### **IV. Scoring:**

The scoring system arriving at the fee determination for INL performance has three components. Each critical outcome contains a number of objectives, which are weighted. Objectives are graded by the measures described for each, and the grades for each objective are rolled-up to arrive at a numerical and letter grade for each critical outcome. Each of the measures identifies significant activities, requirements, and/or milestones important to the success of the corresponding critical outcome and shall be utilized as the primary means of determining the contractor's success in meeting the desired result. Measures are developed to indicate that, if met, the performance level is equivalent to a "B+" grade.

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

| <b>Grade</b> | <b>Overall Weighted Score<br/>from Table A</b> | <b>Percent<br/>Fee Earned</b> |
|--------------|--|-------------------------------|
| <b>A+</b>    | <b>4.3 – 4.1</b>                               | <b>100%</b>                   |
| <b>A</b>     | <b>4.0 – 3.8</b>                               | <b>97%</b>                    |
| <b>A-</b>    | <b>3.7 – 3.5</b>                               | <b>94%</b>                    |
| <b>B+</b>    | <b>3.4 – 3.1</b>                               | <b>91%</b>                    |
| <b>B</b>     | <b>3.0 – 2.8</b>                               | <b>84%</b>                    |
| <b>B-</b>    | <b>2.7 – 2.5</b>                               | <b>77%</b>                    |
| <b>C+</b>    | <b>2.4 – 2.1</b>                               | <b>64%</b>                    |
| <b>C</b>     | <b>2.0 – 1.8</b>                               | <b>38%</b>                    |
| <b>C-</b>    | <b>1.7 – 1.1</b>                               | <b>0%</b>                     |
| <b>D</b>     | <b>1.0 – 0.8</b>                               | <b>0%</b>                     |
| <b>F</b>     | <b>0.7 – 0.0</b>                               | <b>0%</b>                     |

Although the measures are the primary means for determining performance, other performance information from other sources including, but not limited to, BEA’s self-evaluation report, customer service evaluations, operational awareness (daily oversight) activities, “For Cause” reviews (if any), peer reviews, and other outside agency reviews (Office of the Inspector General and the General Accountability Office, etc.) may be utilized in determining BEA’s overall success in meeting an objective. In accordance with Contract Clause I.19, *Conditional Payment of Fee, Profit, and Other Incentives*, if the contractor does not meet the performance requirements of the contract during any performance evaluation period established under the contract, otherwise earned fee may be unilaterally reduced by the contracting officer.

Calculating Individual Objective Scores and Letter Grade:

Based on the measures identified, a letter grade is assigned to each objective. Using Table A, numeric scores are then assigned to each objective. Numeric scores are multiplied by the corresponding weights to arrive at a weighted score for each objective. The weighted scores are added together to arrive at a total score for each of the two outcomes: Nuclear Energy Programs and Site Operations.

The total numeric score for each outcome is entered in Table C. Each total score is multiplied by the assigned weight to arrive at a weighted score for each outcome. These weighted scores are added together to arrive at a total score. The raw score from each calculation shall be carried through to the next stage of the calculation process. The total score will be rounded to the nearest hundredth of a point. A standard rounding convention of x.444 and less rounds down to the nearest hundredth (here, x.44), while x.455 and greater rounds up to the nearest hundredth (here, x.46).

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**Table C. FY 2008 Contractor Score Evaluation**

| Outcomes |                         | Total Numeric Score | Weight | Weighted Score     | Total Score |
|----------|-------------------------|---------------------|--------|--------------------|-------------|
| 1.0      | Nuclear Energy Programs |                     | 50%    |                    |             |
| 2.0      | Site Operations         |                     | 50%    |                    |             |
|          |                         |                     |        | <b>Total Score</b> |             |

The total score from Table C is entered in Table D. Using Table B, the percent of fee earned is entered in Table D. The percent of fee earned is multiplied by the total available fee (\$18.7M for FY 2008) to determine the total fee earned.

**Table D. FY 2008 Final Fee Determination Calculation**

|   |  |
|---|--|
| <b>Total score</b> from Table C<br>(rounded to the nearest hundredth) |  |
| <b>% of Fee</b> earned per Table B                                    |  |
| <b>Total fee earned</b><br>( <b>\$18.7M x % fee earned</b> )          |  |

**V. Performance Status Reporting and Evaluation Process:**

PEMP administration is a formal process that includes requirements for monthly status reports, change control, quarterly status reviews, and final fee determination.

Monthly status of performance to expectations will be provided by both DOE and BEA. Areas of disagreement will be highlighted and addressed. Performance Status Reviews will be conducted periodically as agreed upon by DOE and BEA. BEA is responsible to define and coordinate the process for conducting the reviews and to ensure the involvement of appropriate DOE and BEA counterparts. Reviews will focus on PEMP objectives and measures as well as other significant issues.

On an annual basis, BEA will conduct a formal self-evaluation of its performance relative to each critical outcome, objective, and measure. A written report documenting the self-evaluation will also address other significant issues and will be provided to DOE within ten calendar days after the end of the performance period. The report will be limited to 50 pages.

In addition to monthly reporting, DOE will perform and document a final evaluation of BEA's performance relative to each critical outcome, objective, and measure and will provide a final fee determination. The absence of specific PEMP measures in this plan does not diminish the need to comply with minimum contractual requirements. The Fee Determination Official (FDO) may unilaterally adjust the fee earned based on the contractor's performance against all contract requirements. Data to support fee adjustments may be derived from other sources to include, but



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not limited to, operational awareness (daily oversight) activities; “For Cause” reviews (if any); other outside agency reviews (OIG, GAO, DCAA, etc.), significant events or incidents within the control of the contractor, or other reviews as appropriate.

**VI. Change Control:**

The FY 2008 PEMP was developed with the understanding that both parties engaged in good faith to define meaningful and challenging measures of success. It is also recognized that circumstances may arise in the course of the execution year that warrant a revisit of the agreements. The expectation is that as budgets and work scopes are finalized and measure scope is impacted, there may be necessary changes to the PEMP. When the need for a change has been identified, and validated in accordance with the INL change control principles, INL and DOE will engage in the INL PEMP change control process to negotiate and process changes in a timely manner.

**Section B - Critical Outcomes, Objectives, and Measures**

**1.0 Nuclear Energy Programs - Objectives and Measures**

*Support new nuclear generation capacity that produces carbon-free electricity in the near term and develop next generation nuclear reactor for both electricity and hydrogen production and development of fuel recycling facilities to better manage spent nuclear fuel and more efficiently use the remaining energy content. Develop fuel cycle technologies for deployment in the longer term.*

**Nuclear Energy Program Grading**

| <b>1.0</b>  | <b>Nuclear Energy Programs</b>               | <b>Letter Grade</b> | <b>Numeric Score</b> | <b>Weight</b> | <b>Weighted Score</b> | <b>Total Score</b> |
|---|--|---------------------|----------------------|---------------|-----------------------|--------------------|
| 1.1   | GNEP Technical Integration Office            |                     |                      | 20%           |                       |                    |
| 1.2   | GNEP Program Performance                     |                     |                      | 20%           |                       |                    |
| 1.3   | Next-Generation Nuclear Plant (NGNP) Project |                     |                      | 20%           |                       |                    |
| 1.4   | Nuclear Hydrogen Initiative                  |                     |                      | 5%            |                       |                    |
| 1.5   | ATR User Facility                            |                     |                      | 20%           |                       |                    |
| 1.6   | Space and Defense Power Systems              |                     |                      | 10%           |                       |                    |
| 1.7   | Leadership in Other Nuclear Energy Missions  |                     |                      | 5%            |                       |                    |
| <b>Nuclear Energy Programs Critical Outcome Total Score</b> |  |                     |                      |               |                       |                    |

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**Table E. Performance Criteria for Sections 1.1, 1.2, 1.3, and 1.4**

| <b>Grade</b> | <b>Performance</b>  |
|--------------|---|
| A- to A+     | <p>Quality of deliverables is judged by DOE to exceed expectations defined in the approved work packages.</p> <p>Completion of all Level 1 and Level 2 milestones and all of the above identified tasks on or ahead of schedule. However, DOE has the latitude to accept Level 2 milestones and identified task deliverables beyond the scheduled date provided the overall quality exceeds expectations.</p>   |
| B- to B+     | <p>Quality of deliverables is judged by DOE to be within performance expectations for activities described in the approved work packages</p> <p>Completion of all Level 1 milestones and all of the above identified tasks on or ahead of schedule. Completion of Level 2 milestones shall impact the grade as follows:</p> <ul style="list-style-type: none"> <li>• 100% of milestones completed within budget and on or ahead of schedule = B+</li> <li>• &gt;95% of milestones completed within budget and on or ahead of schedule = B</li> <li>• &gt;90% of milestones completed within budget and on or ahead of schedule = B-</li> </ul>  |
| C- to C+     | <p>Quality of deliverables is judged by DOE to be within performance expectations for activities described in the approved work packages.</p> <p>Completion of all Level 1 milestones and all of the above identified tasks on or ahead of schedule. Completion of Level 2 milestones shall impact the grade as follows:</p> <ul style="list-style-type: none"> <li>• &gt;86% of milestones completed within budget and on or ahead of schedule = C+</li> <li>• &gt;82% of milestones completed within budget and on or ahead of schedule = C</li> <li>• ≥80% of milestones completed within budget and on or ahead of schedule = C-</li> </ul> |
| D            | <p>A Level 1 milestone or an above-listed task is not completed on schedule. Less than 80% of Level 2 milestones are met.</p>   |
| F            | <p>A Level 1 milestone or an above-listed task is not completed. Less than 70% of Level 2 milestones are met.</p>   |

Table E, above, shall be used to determine performance for Section 1.1, GNEP Technical Integration Office, Section 1.2, GNEP Program Performance, Section 1.3, Next-Generation Nuclear Plant (NGNP) Project, and Section 1.4, Nuclear Hydrogen Initiative.

**1.1 Global Nuclear Energy Partnership (GNEP) Technical Integration Office (TIO)**

BEA’s major responsibility as the GNEP TIO is to be the point of contact between DOE and the national laboratories for coordination, integration and reporting of the work being performed by participating national laboratories and industry. This includes integration of all Research and Development (R&D) and Technology Development (TD) activities necessary for effective GNEP execution; implementation of a project controls system meeting the requirements of DOE O 413.3A, where all GNEP Program financial and schedule data are collected, analyzed and integrated; cost and schedule reports issued, and an administrative function that will deal with activities such as Quality Assurance (QA), documentation and communications. The milestones for these objectives address full implementation of a Project Management and Controls System

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that includes a Planning/Work Package Generator, final draft Change Control Process submitted to DOE, Performance Measurement and Analysis, and an Integrated Master Schedule.

Major tasks for the GNEP TIO at INL in FY 2008 GNEP Work Packages include:

- Complete activities for the startup of the TIO, including implementation of an improved Work Package Generator, Work Breakdown Structure, Change Control Procedures, and Project Management Plans, GNEP Project Controls Policy Manual, and the TIO Operations Plan by December 31, 2007;
- Complete an integrated GNEP schedule by March 31, 2008, to include all Level 1 and Level 2 milestones;
- Provide financial and schedule analyses and trend interpretations to DOE for each month by the third week of the following month, beginning in December 2007. These reports will provide corrective action plans for activities with schedule or cost deviations from planned values by more than 10 percent;
- Develop and issue an INL GNEP QA Program Plan (QAPP) that is compliant with the GNEP Quality Assurance Program Document (QAPD) within 60 calendar days of GNEP QAPD approval by DOE-HQ;
- Complete assessments of GNEP performing organization QA document submittals required by the GNEP QAPD within 6 calendar months of GNEP QAPD approval by DOE-HQ;
- Integrate National Environmental Policy Act (NEPA) input from other national laboratories and provide support for the Secretarial 2008 decision as requested by the GNEP-HQ Program Office;
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- Complete development of Planning Packages for FY 2009 within five weeks after budget guidance is provided by the GNEP-HQ Program Office.

Work package milestone dates supersede the dates above in case of conflict. In determining the performance of this objective, the DOE evaluator(s) shall consider progress reports, Program Office reviews/oversight, deliveries against milestone dates, etc. in accordance with the performance criteria in Table E, "Performance Criteria for Sections 1.1, 1.2, 1.3, and 1.4."

## **1.2 GNEP Program Performance**

Execute major GNEP technical support activities and conduct effective R&D in support of the GNEP objectives. This includes successful support for the spent fuel recycle facility project, the advanced recycle reactor project, the Advanced Fuel Cycle Facility, and the Advanced Fuel Cycle (AFC) R&D program and mission. Key elements of focus in FY 2008 for the AFC R&D

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program include Advanced Fuel Cycle Initiative (AFCI) Fuels fabrication and irradiations, post-irradiation examination (PIE) equipment upgrade, and aqueous and electrochemical fuel reprocessing technology development.

Major tasks for the INL in FY 2008 GNEP Work Packages include:

- Complete technical input for the 2008 Secretarial Decision on the path forward for GNEP by March 31, 2008. The input shall include details on technical options including technology readiness and R&D needs for commercial deployment, assessment of cost competitiveness of GNEP technologies, a complete qualitative risk assessment, and technology options for risk mitigation;
- Successfully complete PIE equipment upgrade such that all equipment is installed and operating in conformity with the schedule in the Project Execution Plan;
- Complete fabrication of fuel rodlets containing minor actinides for the AFC-2C and AFC-2D oxide fuel tests by September 30, 2008 (contingent upon shipment of fuel pellets from Los Alamos National Laboratory (LANL) by February 29, 2008);
- Demonstrate the electrolytic reduction of irradiated MOX fuel by September 30, 2008;
- Provide a cost and schedule estimate by March 31, 2008, for potential Transient Reactor Experiment and Test (TREAT) restart;
- Provide a letter report summarizing the domestic and international options for fabricating the startup fuel by February 4, 2008.

Work package milestone dates supersede the dates above in case of conflict. In determining the performance of this objective, the DOE evaluator(s) shall consider progress reports, Program Office reviews/oversight, deliveries against milestone dates, etc. in accordance with the performance criteria in Table E, "Performance Criteria for Sections 1.1, 1.2, 1.3, and 1.4."

### **1.3 Next Generation Nuclear Plant (NGNP) Project**

The INL is leading the NGNP Project and coordinates the necessary work among several DOE Labs and subcontractors. The Project is entering the Conceptual Design phase in FY 2008 while it continues to perform R&D activities in support of the identified design data needs common to several reactor concepts. As the design evolves into a set configuration, the Project R&D will focus on specific areas needed for materials codification and ultimately the Nuclear Regulatory Commission (NRC) License application. In FY 2008 the following milestones support the project:

- Implement fuel acquisition strategy and technology development plan:
  - Complete AGR-1 PIE plan by September 30, 2008.

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- Implement graphite acquisition strategy and technology development plan:
  - Complete AGC-1 final design by July 30, 2008; and
  - Complete Reactor Pressure Vessel (RPV) and High Temperature Materials (HTM) acquisition strategy and technology development plan by April 30, 2008.
- Award subcontracts for initial Conceptual Design activities, including Technology Selection Design Studies by December 22, 2007. (Number and value of subcontracts dependent on funding level.);
- Successfully pass an annual NQA-1 Audit with no significant findings by September 30, 2008; and
- Complete by May 31, 2008, an analysis of the design, cost and schedule ramifications for maintaining a technology neutral hydrogen production process for NGNP through the conceptual design phase. The analysis will include an assessment of maintaining a technology neutral concept vs. selecting a hydrogen production process in advance of the recommendations from the Nuclear Hydrogen Initiative. The analysis will also include a recommended course of action, including provisions for close collaboration with the Nuclear Hydrogen Initiative.

Work package milestone dates supersede the dates above in case of conflict. In determining the performance of this objective, the DOE evaluator(s) shall consider progress reports, Program Office reviews/oversight, deliveries against milestone dates, etc. in accordance with the performance criteria in Table E, "Performance Criteria for Sections 1.1, 1.2, 1.3, and 1.4."

#### **1.4 Nuclear Hydrogen Initiative (NHI)**

FY 2008 progress as defined by INL and Headquarters program/project plans and work packages, including operation of the High-Temperature Electrolysis (HTE) Integrated Laboratory-Scale (ILS) Experiment. Focus for FY 2008 will include operation of the HTE ILS Experiment at the 15 kW power level and operation of a ten-cell HTE stack at prototypic temperatures (750-900 C) for greater than 2500 hours to determine degradation mechanisms.

Work package milestone dates supersede the dates above in case of conflict. In determining the performance of this objective, the DOE evaluator(s) shall consider progress reports, Program Office reviews/oversight, deliveries against milestone dates, etc. in accordance with the performance criteria in Table E, "Performance Criteria for Sections 1.1, 1.2, 1.3, and 1.4."

#### **1.5 Advanced Test Reactor (ATR) User Facility**

DOE considers the ATR User facility to be an area requiring the concentrated focus of senior BEA management. DOE seeks innovation, creativity, aggressive scheduling, and execution of actions related to the ATR User Facility. In FY 2007, the INL ATR was designated by DOE as a National Scientific User Facility (NSUF). In FY 2008, activities will focus on implementing laboratory processes necessary to establish and manage the user facility, engaging the user

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community, education of NSUF stakeholders, establishing NSUF leadership, and standardizing criteria for experiment selection.

In determining the performance of the objective, the DOE evaluator(s) shall consider the following milestones, as well as progress reports, Program Office reviews/oversight, deliveries against milestone dates, etc.:

- At least one non-INL, non-traditional experiment has been installed in the ATR, ready for irradiation or under irradiation.
- Establish key ATR NSUF planning basis including:
  - Program metrics by January 31, 2008
  - Industry Program Plan issued by March 31, 2008
- Standardization of experiment hardware and bounding safety case that will support experiment selection for FY 2008 completed by November 15, 2007;
- Complete an independent review, by January 31, 2008, of progress and readiness towards transitioning the ATR programs to a user facility concept;
- Select (offer extended and accepted) a permanent director by March 1, 2008;
- Conduct the inaugural ATR NSUF Summer School by August 31, 2008;
- Planning completed for at least two experiments by non-INL, non-traditional test sponsors. The INL will obtain DOE agreement for each experiment meeting this definition.

| <b>Grade</b>               | <b>Performance</b>   |
|----------------------------|--|
| Excellent<br>Pass<br>(4.3) | All milestones completed on or ahead of schedule and with high quality. Business Office staffed and operational. Planning completed for at least three non-INL, non-traditional experiments. |
| Pass<br>(3.3)              | All milestones completed on time and with high quality, while maintaining the primary test sponsor's schedule for experiments.   |
| Fail<br>(0.7)              | Any milestone is missed.   |

**1.6 Space and Defense Power Systems**

This measure will assess INL's performance in supporting the fueling and testing of the Advanced Long-Term Battery (ALTB) units #1 and #2 and the Multi-Mission Radioisotope Thermo-electric Generator (MMRTG) flight unit in support of their respective customers, and performance in supporting Radioisotope Power Systems (RPS) infrastructure activities which includes supporting lead laboratory activities (i.e., Material Review Board and Document

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Configuration Control Board actions), maintaining facility availability, transportation of RPS units and components, and supporting neptunium transportation and storage.

In determining the performance of the objective, the DOE evaluator(s) shall consider the following milestones as well as progress reports, peer reviews, customer feedback, etc.:

- Complete Battery Assembly Units #1 and #2 fueling and testing and all activities required to be ready to ship the units by February 10, 2008, or within 120 calendar days of fuel receipt for both units if all fuel has not been received by October 28, 2007;
- Complete Production Readiness Review (PRR) and closeout for establishing the capability to radiograph fuel clad assemblies (FCAs) to verify weld/cladding integrity by March 31, 2008;
- Complete fueling of the first MMRTG by August 31, 2008, or within 90 calendar days of receiving the electrically heated thermoelectric generator (ETG) or within 135 calendar days of receiving fuel, whichever is later;
- Execute the trailblazer support activity at the Kennedy Space Center (KSC) with KSC official sign-off on successful completion of the exercise in support of the Mars Science Laboratory launch; and
- Execute preparation and support activities for the purchase and shipment of Pu-238 from Russia with transfer of Pu-238 to the Office of Secure Transportation at a United States port of entry by September 30, 2008.

**NOTE:** If the scheduled completion of any of the above milestones moves into FY 2009 as a result of the provisions expressed in each of the milestones and all other milestones are completed on time and within budget, the fee (\$500,000) associated with this measure will be paid provisionally. If completion of the milestone(s) that moves into FY 2009 is not completed on time and within budget, the \$500,000 provisional fee associated with this measure will be returned to DOE.

| <b>Grade</b>               | <b>Performance</b>   |
|----------------------------|--|
| Excellent<br>Pass<br>(4.3) | Above milestones met at least one week ahead of schedule or at least 5% under budget as defined in the lifecycle project baseline. Complete an alternatives analysis by March 31, 2008, for a new technology to replace the Pu-238 powder technologies currently in use at LANL. Conduct testing and down-select a preferred alternative to the powdered Pu-238 process. |
| Pass<br>(3.0)              | Meets above milestones on schedule as defined above and within budget as defined in the lifecycle project baseline with the planned start date   |
| Fail<br>(0.7)              | Does not meet above milestones on schedule as defined above and within budget as defined in the lifecycle project baseline.  |

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**1.7 Leadership in Other Nuclear Energy Missions**

The current and future Light Water Reactors (LWRs) in the U.S. have great potential to help the nation address climate change and enhance its energy security. INL will support the Office of Nuclear Energy in developing a joint industry-government plan for LWR technology development, in order to prepare for a program start as early as FY09. Beginning with the groundwork laid in the LWR R&D Strategy update activities in FY07, the activities in FY 2008 will focus on the development of a three-year program plan, creation of an industry advisory subcommittee (advisory to the INL), and the forging of a public-private partnership to share funding of the program. The following milestones are given:

- Complete the Strategy for LWR R&D (Revision 2) with NE, by November 30, 2007, in order to enable NE to publish it before the end of the 2007 calendar year.
- Work with the INL industry advisory committee to determine the priority program objectives and major tasks, within general funding guidelines provided by NE, by November 30, 2007.
- Gain agreement in principle of the partners in a public-private partnership (proposed to be NE and Electric Power Research Institute (EPRI)) to the principles of governance, cost sharing, and management of the partnership program by April 30, 2008.
- With industry representatives, identify and prioritize the R&D scope based on FY 2009 budget request by June 30, 2008. The list of prioritized scope will identify: 1) the lead organization (INL or EPRI); 2) how scope will be implemented and contracted (e.g., INL through work authorization, EPRI via subcontract, cooperative agreement between EPRI and DOE, etc.); and 3) which scope will be solicited from universities via NERI.
- Provide a full Program Plan and FY 2009 R&D scope based on the FY 2009 budget request by September 30, 2008.

Note: If funding for the LWR R&D Program is not included in the President's budget, industry may not support work to complete an industry-government partnership program plan. If this is the case, INL will prepare a plan for supporting LWR R&D identified in the Idaho National Laboratory/Nuclear Industry Strategic Plan for Light Water Reactor Research and Development, and defining a Generation III mission at INL that will lead the DOE laboratory complex in supporting work not suitable for industry.

In determining the performance of the objective, the DOE evaluator(s) shall consider progress reports, Program Office reviews/oversight, deliveries against milestone dates, etc.:



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| <b>Grade</b>               | <b>Performance</b>  |
|----------------------------|---|
| Excellent<br>Pass<br>(4.3) | Meets above milestones on schedule as defined above and performance is judged by DOE to exceed expectations.                |
| Pass<br>(3.3)              | Meets above milestones on schedule as defined above.  |
| Fail<br>(0.7)              | Does not meet above milestones on schedule as defined above and within budget as defined in the lifecycle project baseline. |

**2.0 Site Operations Objectives and Measures**

*These are significant actions in FY 2008 that are critically important to the safety, security, sustainability, and technical reputation of INL.*

**Site Operations Grading**

| <b>2.0</b>  | <b>Site Operations</b>                                 | <b>Letter Grade</b> | <b>Numeric Score</b> | <b>Weight</b> | <b>Weighted Score</b> | <b>Total Score</b> |
|---|--|---------------------|----------------------|---------------|-----------------------|--------------------|
| <b>2.1</b>  | <b>Excellence in Facility Operations</b>               |                     |                      | 20%           |                       |                    |
| <b>2.2</b>  | <b>Safety Management and Environmental Stewardship</b> |                     |                      | 15%           |                       |                    |
| <b>2.3</b>  | <b>Technical Capabilities</b>                          |                     |                      | 15%           |                       |                    |
| <b>2.4</b>  | <b>Cyber Security/ Physical Security</b>               |                     |                      | 15%           |                       |                    |
| <b>2.5</b>  | <b>Nuclear Materials Consolidation/Disposition</b>     |                     |                      | 15%           |                       |                    |
| <b>2.6</b>  | <b>Leadership and Stewardship of the Laboratory</b>    |                     |                      | 20%           |                       |                    |
| <b>Site Operations Critical Outcome Total Score</b> |  |                     |                      |               |                       |                    |

**2.1 Excellence in Facility Operations**

Excellence in the operation of INL nuclear facilities is key to the success of the nuclear mission. The following key initiatives to move the INL forward in this area are the Advanced Test Reactor (ATR) Life Extension Plan (LEP) and the Materials and Fuels Complex (MFC) Safety Basis Upgrade Plan.

A. Advanced Test Reactor Life Extension Program:

In determining the performance of the objective, the DOE evaluator(s) shall consider the following deliverables as defined in the "Preliminary Project Execution Plan for the Advanced Test Reactor Life Extension Project":

- Complete Design Basis Reconstitution.
- Complete Material Condition Assessment.
- Complete Seismic Assessment.

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- Complete a critical and spare parts evaluation that accomplishes the following:
  - Identifies key equipment whose failure would cause a reactor shutdown (single point failure).
  - Evaluates current maintenance plans and repair capabilities for each of the key equipments identified above.
  - Evaluates additional operational monitoring and/or maintenance requirements to improve equipment reliability and/or to identify equipment performance problems before they result in failure.
  - Evaluates planned equipment replacements based on availability of vendor support and spares for existing equipment.
  - Assesses the cost of measures to mitigate equipment vulnerabilities and impacts to current work scope.
  - Provides a cost estimate for the procurement of critical spares.

This evaluation shall be completed and submitted to DOE by March 31, 2008.

**B. Materials and Fuels Complex Safety Basis Upgrade:**

INL shall complete upgrade and implementation of MFC Documented Safety Analysis (DSA) in accordance with the agreed-upon schedule. Focus on upgrades is to address the most significant risks associated with existing operations and to establish capability to support future INL mission scope. It is important that INL make significant progress towards reducing risk with the MFC DSA upgrades. Hazard evaluation and selection of safety significant class systems are critical prerequisite steps to the completion of the Fuel Conditioning Facility (FCF), Hot Fuel Examination Facility (HFEF) and Radioactive Scrap and Waste Facility (RSWF) Documented Safety Analysis Upgrades. In FY 2008 the following deliverables will be evaluated:

- Documented Safety Analysis Upgrades:
  - Submit two of the top four priority DSAs for DOE review and approval;
  - Complete at least 50% of the remaining two of the top four priority DSAs as determined through a progress review with DOE;
  - Complete initial documented Hazard Evaluation and selection of safety class (SC) and safety significant class (SSC) systems for the Fuel Conditioning Facility (FCF), Hot Fuel Examination Facility (HFEF) and Radioactive Scrap and Waste Facility (RSWF);
  - Conduct four (4) assessments of system functionality for the SC/SSC systems selected during the initial hazard evaluations; and
  - Complete, and submit to DOE for approval, the Neutron Radiography Reactor Facility (NRAD) safety basis addendum in support of the reactor core conversion.

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- Fuel Manufacturing Facility (FMF) Implementation:
  - Manufacture at least 50 percent of the needed fuel storage modules for the FMF vault;
  - Commence the re-racking of FMF material into new fuel storage modules and racks;  
and
  - Complete seismic upgrades to FMF vault.

C. Other INL Operations:

There are missions at INL supporting the U.S. Department of Defense and National Security that benefit from the unique capabilities of INL. The second sentence of the DOE Vision for the INL states that “The INL will also establish itself as a major center for national security technology development and demonstration.” These missions are essential to national security and should be fully supported. As a measurement of success in this area in FY 2008, INL shall accomplish customer requirements for the Advanced Test Reactor, SMC and National Security operations. The performance for Excellence in Facility Operations (A, B, & C above) shall be determined as follows:

| Grade    | Performance   |
|----------|---|
| A- to A+ | A. Complete all of the above LEP tasks and performance is judged by DOE to exceed expectations.<br>B. Complete all of the above DSA tasks and all of the FMF tasks.<br>C. Customer feedback and progress reviews for ATR, SMC and National Security operations demonstrate outstanding quality. |
| B- to B+ | A. Complete all of the above LEP tasks.<br>B. Complete all of the above DSA tasks (except safety basis addendum for NRAD) and at least 2 of the FMF Implementation Tasks.<br>C. Customer feedback and Progress reviews for ATR, SMC and National Security operations are of high quality.       |
| C- to C+ | A. Complete at least 3 of the above LEP tasks.<br>B. Complete at least 3 of the DSA upgrade tasks and at least 1 of the FMF Implementation Tasks.<br>C. Customer feedback and Progress reviews for ATR, SMC and National Security operations are of average quality.                            |
| D        | A. Complete 2 of the above LEP tasks.<br>B. Complete at least 1 of the DSA upgrade tasks or at least 1 of the FMF Implementation Tasks.<br>C. Customer feedback and Progress reviews for ATR, SMC and National Security operations are not satisfactory.  |
| F        | No tasks completed.   |

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Weighted scores for each deliverable and total weighted score are calculated using the table below:

| <b>Deliverable</b>                                   | <b>Grade</b> | <b>Score</b> | <b>Weight</b> | <b>Weighted Score</b> |
|--|--------------|--------------|---------------|-----------------------|
| A. Advanced Test Reactor Life Extension Program      |              |              | 30%           |                       |
| B. Materials and Fuels Complex Safety Basis Upgrades |              |              | 30%           |                       |
| C. Other INL Operations                              |              |              | 40%           |                       |
| <b>Total Weighted Score</b>                          |              |              |               |                       |

**2.2 Safety Management and Environmental Stewardship**

INL is a large site with safety risks that demand strict application of Integrated Safety Management Principles. There are also safety issues related to adverse weather conditions (snow, ice, intense heat, and cold), natural catastrophes (brush fires), extensive ground transportation requirements for employees and a significantly deteriorated infrastructure. Overall safety performance at INL is good despite the hazards inherent in the work performed and the adverse external factors that can cause serious safety concerns that are often outside the normal conditions at DOE sites. Good self assessment and corrective action programs are essential to properly address and resolve safety issues. In determining the performance of the objective, the DOE evaluator(s) shall consider the following milestones:

- Develop a comprehensive and functional self-assessment and corrective action program in support of the contractor assurance system. This will be measured by the following results in FY 2008:
  - Corrective action management (ICARE) is redesigned to more effectively and efficiently support management identification, correction, and trending of issues/problems regardless of severity;
  - System solution is benchmarked against best in class businesses and best in nuclear operations practices;
  - Improved tracking and trending capability of issues and assessment results; and
  - Independent assessment of contractor assurance system that includes effectiveness of the supporting ICARE system.
- Incorporate the energy conservation and sustainability goal areas into the INL Environmental Management System. Through the existing Pollution Prevention Program and the INL Energy Management Plan, make measurable progress toward meeting the goals of Executive Order 13423 “Strengthening the Federal Environmental, Energy, and Transportation Management”. Examples include maintaining a bronze rating on the Federal Electronics

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Challenge, working with Energy Savings Performance Contractors (ESPCs) or other private sector, third-party financing options to identify energy conservation and projects across the INL, and increasing availability and use of biofuels by fleet vehicles. Implement the recommendations from the INL Green Building Strategy Report (May 2005) on construction of new, and renovation of existing, facilities using less energy and water, reducing solid waste and pollutants, and maximizing use of recycled building materials. Initiate metering the use of potable water, electricity, and thermal energy and begin to establish reduction goals. The laboratory will make required progress on the Transformational Energy Action Management (TEAM) Initiative, Executive Order 13423.

- Complete the FY 2008 scheduled actions in PLN-1838, "Electrical Safety Improvement Plan".

In determining the performance of the objective, the DOE evaluator(s) shall consider progress reports, Program Office reviews/oversight, deliveries against milestone dates, etc.:

| <b>Grade</b>            | <b>Performance</b>                                     |
|-------------------------|--|
| Excellent Pass<br>(4.3) | Deliverables are judged by DOE to exceed expectations. |
| Pass<br>(3.3)           | Deliverables on time and meet expectations             |
| Fail<br>(0.7)           | Deliverables do not meet expectations.                 |

### **2.3 Technical Capabilities**

As the DOE lead nuclear laboratory, the INL must focus on developing a workforce that mirrors the disciplines required to directly support nuclear energy programs and have nuclear capabilities highly valued by the scientific and engineering peer community and industries. DOE wants the INL to focus on technical excellence in nuclear engineering disciplines in their nuclear energy programs and in the management of programs by certified project management professionals. The Science & Engineering Eminence Index (SEEI) encompasses those measures used in the scientific and engineering communities to evaluate contributions to the scientific and engineering knowledge base as exemplified by publications, patents and scientific and technical awards. The largest contribution to the SEEI should continue to be in the nuclear programs area.

In addition to the SEEI, the INL should engage industry partners and universities in meaningful nuclear-related collaborations that foster a transfer of information and recognition of mutual benefit. By November 15, 2007, the INL will develop an index to capture this industry and university engagement, with FY 2007 as a baseline, and increase industry and university engagement by 5% in FY 2008.

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| Grade     | Performance   |
|-----------|---|
| A- to A+  | A+ = greater than 10% growth (3.29) in INL’s science and engineering reputation as measured by the Science & Engineering Eminence Index.<br>A = greater than 7% growth (3.20).<br>A- = greater than 6 % growth (3.17).<br>Increase industry and university engagement by 8% over FY 2007. |
| B – to B+ | B+ = greater than 5 % growth (3.14) as measured by the Science & Engineering Eminence Index.<br>B = greater than 4% growth (3.11).<br>B- = greater than 3 % growth (3.08).<br>Increase industry and university engagement by 5% over FY 2007.   |
| C- to C+  | Demonstrate 2% or greater growth (3.05) as measured by the Science & Engineering Eminence Index.<br>Industry and university engagement increase of less than 5% over FY 2007.   |
| D         | Less than 2% growth (3.05) as measured by the Science & Engineering Eminence Index.<br>Industry and university engagement stagnant compared to FY 2007.   |
| F         | No measurable growth as measured by the Science & Engineering Eminence Index.   |

**2.4 Cyber Security/ Physical Security**

Cyber Security defines, manages, and controls risk to prevent inadvertent release of or unauthorized access to controlled information. The Cyber Security requirements landscape is very dynamic and driven by technical as well as political risk. The key to INL success in Cyber Security is risk-based implementation. INL must comply with requirements to ensure continuity of network and information technology systems (complete necessary actions to obtain/maintain Authority to Operate; such as conversion of INL classified systems to diskless architecture; completion of necessary corrective actions to address classified and unclassified cyber security deficiencies; accreditation of INL enclaves; and successful conclusion of the Office of Health, Safety and Security (HSS) cyber security inspection). In addition, INL will continue to make investments in mission-driven technologies. Physical security is critical to continued operations across the Site. Security activity must demonstrate appropriate completion of designated Design Basis Threat (DBT) milestones, compliance with established requirements.

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Evaluation of performance will be measured as follows:

| <b>Grade</b>               | <b>Performance</b>   |
|----------------------------|--|
| Excellent<br>Pass<br>(4.3) | All requirements are met to allow for continuity of network and information technology (IT) operations of all INL mission-essential systems, and INL sustains investment in mission-directed technologies. Physical security maintains/improves high level of operational performance, while achieving all established milestones; continues to be recognized as a leader in demonstrating new technologies. New requirements are met through innovative solutions that demonstrate cost containment and operating efficiency. |
| Pass<br>(3.3)              | All requirements are met to allow for continuity of network and IT operations of all INL mission-essential systems. Physical security is performing in an acceptable manner and DBT milestones are met.  |
| Fail<br>(0.7)              | INL does not maintain continuity of network and IT operations in INL mission essential-systems. INL does not complete DBT milestones as designated.  |

## **2.5 Nuclear Materials Consolidation/Disposition**

INL is responsible for management of spent nuclear fuel (SNF) and unirradiated or slightly irradiated special nuclear materials (SNM) which are primarily stored at MFC and RTC. Nuclear materials are generally received from other DOE sites for R&D activities or for treatment through specialized processes. The effective and efficient management of nuclear materials is essential for supporting INL missions and is achieved by ensuring materials needed to support DOE/laboratory missions are available, and by dispositioning, either through recycle or disposal, materials that are no longer needed.

In determining the performance of this measure, DOE shall evaluate the following deliverables against the established criteria:

- A. Receive Sandia Debris Bed material from Sandia National Laboratory;
- B. Receive Fast Flux Test Facility (FFTF) sodium bonded fuel from Hanford Site;
- C. Reconfigure the Zero Power Physics Reactor (ZPPR) to support nuclear materials disposition plan including:
  - decommissioning of the reactor in accordance with project milestones; and
  - approval to reconfigure ZPPR to support nuclear material packaging process scheduled for operation in FY 2009.
- D. Complete at least two offsite shipments of excess Special Nuclear Material of a Safeguards Category I quantity;
- E. Establish decision criteria to support long-term management for INL Nuclear Materials including:

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- Develop a fuel transfer plan that defines the activities, costs, and schedule required to transfer EBR-II SNF from INTEC to MFC for treatment, in preparation for shipments to occur during FY 2009 – FY 2011;
- Identify GNEP requirements for existing materials – type, form, and use of material;
- Prepare staffing and operational run plan for Fuel Conditioning Facility to increase material processing throughput; and
- Develop a comprehensive Nuclear Material Management Strategy for the INL.

Each deliverable above is evaluated as follows:

| <b>Grade</b>            | <b>Performance</b>                                     |
|-------------------------|--|
| Excellent Pass<br>(4.3) | Deliverables are judged by DOE to exceed expectations. |
| Pass<br>(3.3)           | Deliverables are on time and meets expectations        |
| Fail<br>(0.7)           | Deliverables do not meet expectations.                 |

Weighted scores for each deliverable and total weighted score are calculated using the table below:

| <b>Deliverable</b>                         | <b>Grade</b> | <b>Score</b> | <b>Weight</b> | <b>Weighted Score</b> |
|--|--------------|--------------|---------------|-----------------------|
| A. Receive Sandia Fuel Debris Material     |              |              | 25%           |                       |
| B. Receive FFTF sodium bonded fuel         |              |              | 25%           |                       |
| C. Reconfigure ZPPR                        |              |              | 20%           |                       |
| D. Complete at least two offsite shipments |              |              | 20%           |                       |
| E. Establish decision criteria             |              |              | 10%           |                       |
| <b>Total Weighted Score</b>                |              |              |               |                       |

**2.6 Leadership and Stewardship of the Laboratory**

The leading statement in the DOE vision for the INL is "...for the INL to enhance the Nation's energy security by becoming the preeminent, internationally-recognized nuclear energy research, development, and demonstration laboratory within ten years." BEA leadership will enable INL's success in this area; and strengthen and aid in the accomplishment of the overall vision. In determining the performance of the objective, the DOE evaluator(s) shall consider the following:



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- Make measurable progress in areas that signify that INL is moving promptly toward premier national lab status;
- Sustainable growth of historic missions at INL, including support for the U.S. Department of Defense, that benefit from the unique capabilities of INL. In support of these historical missions, INL shall accomplish the following:
  - Complete a comprehensive review of the INL programs to identify program areas that are not consistent with the INL core mission of nuclear energy and national security. This review should include options for either phasing out these programs or for ensuring they remain or become self sustaining;
  - Identify barriers to the growth of DOE and commercial nuclear R&D at the INL by completing a comprehensive review of the barriers that exist which, currently or in the future, may inhibit its ability to respond quickly and efficiently to NE program needs. The review should identify barriers internal to INL, barriers external to INL, and a prioritization of barriers to remove, prospective strategies for removing the barriers and a determination of the benefits of removal of each barrier.\*
- Complete and implement the FY 2008 contractor corrective actions contained in the corrective action plans responding to HSS inspections conducted in 2007;
- Benchmark programs at other national laboratories that may benefit the INL;
- Demonstrate improvements in implementation of an oversight inspection program consistent with DOE O 226.1A;
- Laboratory vision and strategy is established, communicated, recognized and clearly conveys the Laboratory's role in the future of Nuclear Energy;
- Demonstrate development and execution of a comprehensive business approach that aligns and integrates all resource elements (workforce, funds, infrastructure, etc.) with the priorities of the Laboratory's missions and objectives;
- Demonstrate ability to develop and leverage appropriate relationships with private industry, other national laboratories and government agencies to benefit the Laboratory and the taxpayer. The laboratory will cultivate and maintain partnerships necessary to deliver on the principal missions;
- Support DOE oversight activities and provide timely response to findings and recommendations, and effectiveness of corrective actions;
- Quality and responsiveness of communications between the Laboratory, and NE and DOE-ID so that DOE can deal effectively with both internal and external constituencies;

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- Demonstrate leadership alignment and integration in successfully branding the INL’s nuclear mission with industry, government, and employees;
- Execute effective communications and obtain positive visibility and acceptance with public stakeholders on a local, state and national basis for the laboratory’s missions and objectives as indicated by communications deliverables agreed upon by DOE and BEA;
- Demonstrate effective corporate support to develop programs, build scientific capability, and improve operational efficiencies. Provide corporate leadership in safety management and implementation of the contractor assurance system;
- Customer satisfaction with Work for Others (both private and federal). The Laboratory shall establish a baseline measure of customer satisfaction that addresses timeliness, quality, and ease of doing work with the INL; and
- Complete a first draft of the Required Assets for a Nuclear Energy Applied R&D Program by September 30, 2008.

| <b>Grade</b> | <b>Performance</b>   |
|--------------|--|
| A- to A+     | Significant progress across all measures identified above. Complete the removal of three identified barriers that are internal to INL.*      |
| B- to B+     | Significant progress across most measures identified above. Complete the removal of one identified barrier that is internal to INL.*         |
| C- to C+     | Progress across a few areas identified above.  |
| D            | Fails to make progress on areas identified above.  |
| F            | Fails to implement change in above areas or occurrence of a high profile incident that demonstrates gross incompetence in program execution. |

\* as described above