Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force

R-1 Item Nomenclature
PE 0305182F: Spacelift Range System (SPACE)

A. Mission Description and Budget Item Justification

The Eastern Range (ER) at Patrick Air Force Base (AFB)/Cape Canaveral Air Force Station, FL, and the Western Range (WR) at Vandenberg AFB, CA, make up the Spacelift Range System (SLRS), also known as the Launch and Test Range System (LTRS). The ER and WR provide tracking, telemetry, communications, flight safety, and other capabilities to enable: national security, civil, and commercial space launches; ballistic missile and missile defense test launches; and aeronautical and guided weapons tests. Decreasing reliability of aging range systems leads to higher operations and maintenance costs and increased risk of launch delays.

The AF will address range deficiencies in FY14 via multiple contracts, including the LTRS Integrated Support Contract (LISC), a command destruct modernization contract, small business set-aside contracts for ER and WR network modernization, and the Systems Engineering and Integration (SE&I) Contract. As a follow-on to the Spacelift Range System Contract (SLRSC) which runs through FY13, the AF will award LISC as a consolidated sustainment, operations, and maintenance contract in FY14. LISC will provide interface systems engineering, technical studies, and requirements analysis to integrate future maintenance and sustainment upgrades with modernization efforts. Also, the separate Systems Engineering and Integration (SE&I) contract supporting the program management office will expand efforts to provide systems engineering and integration support for future modernization efforts, in terms of system baselines, configurations, and architectures. These efforts will comply with OSD policies and standards for interface with IT systems.

In addition to these system upgrades, the Standard Space Trainer program will provide a complementary training application for the Spacelift Ranges, incorporating Range Modernization functionality, as part of the common platform for all space system operational training.

All of these upgrades to fielded systems at operating ranges are categorized as Budget Activity 7, Operational Systems Development.
### B. Program Change Summary ($ in Millions)

<table>
<thead>
<tr>
<th></th>
<th>FY 2012</th>
<th>FY 2013</th>
<th>FY 2014 Base</th>
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<td>• Congressional Adds</td>
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<td>• Congressional Directed Transfers</td>
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### C. Accomplishments/Planned Programs ($ in Millions)

#### Title: Range Modernization (SLRSC)

**Description:** SLRSC continues systems engineering, special studies, and requirements analysis for modernization of selected telemetry, radar, and command destruct instrumentation site systems through FY13. Subsequently, the AF will accomplish systems engineering, special studies, and requirements analysis via the Launch and Test Range System Integrated Support Contract (LISC) to integrate its range operations, maintenance, and sustainment (OM&S) functions with future range modernization efforts.

**FY 2012 Accomplishments:**
SLRSC continued systems engineering, special studies, and requirements analysis for modernization of selected command destruct, radar, and telemetry instrumentation site systems.

**FY 2013 Plans:**
SLRSC will complete systems engineering, special studies, and requirements analysis for modernization of selected command destruct, radar, and telemetry instrumentation site systems.

**FY 2014 Plans:**
N/A

#### Title: LISC Systems Engineering and Tech Support

**Description:** Beginning in FY14, the AF will accomplish interface systems engineering, special studies, and requirements analysis via the Launch and Test Range System Integrated Support Contract (LISC) to integrate its future range operations, maintenance, and sustainment (OM&S) functions with future range modernization efforts.

<table>
<thead>
<tr>
<th></th>
<th>FY 2012</th>
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<th>FY 2014</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
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C. Accomplishments/Planned Programs ($ in Millions)

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<th>FY 2014</th>
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</thead>
<tbody>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**FY 2012 Accomplishments:**
N/A

**FY 2013 Plans:**
N/A

**FY 2014 Plans:**
LISC will initiate interface systems engineering, special studies, and requirements analysis to integrate its future range operations, maintenance, and sustainment (OM&S) functions with future range modernization efforts. Additionally, LISC will integrate its future OM&S functions with the primary systems engineering and integration contract supporting the program management office.

**Title:** Systems Engineering and Integration

**Description:** Provide independent, comprehensive systems engineering and integration efforts, via the SE&I contract. These efforts are focused on future system definition, baselines, range architectures, and integration planning for modernization and sustainment efforts. SE&I ensures modernization and sustainment efforts address operational requirements; launch enterprise transformation plans; reliability, maintainability, and availability factors; and necessary interfaces with IT systems.

**FY 2012 Accomplishments:**
Continued independent SE&I efforts to integrate modernization and sustainment efforts into the ranges for the future. Provided systems definition, baseline, architecture, integration planning and support for future systems. Included products of completed SLRSC instrumentation modernization and sustainment efforts in future plans, as well as sustainment products from follow-on LISC and modernization products from OPAF-funded network and command destruct contracts.

**FY 2013 Plans:**
Continue independent SE&I efforts to integrate modernization and sustainment efforts into future ranges. Provide systems definition, baseline, architecture, integration planning and support for future systems. Refine plans to include LISC sustainment products and network and command destruct modernization products in future architecture.

**FY 2014 Plans:**
Expand independent SE&I efforts to integrate modernization and sustainment efforts into future ranges. Provide systems definition, baseline, architecture, integration planning and support for future systems. Add integration of LISC sustainment efforts, ER and WR network modernization, and command destruct modernization in range future architecture.

**Title:** Program Management Administration

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</thead>
<tbody>
<tr>
<td>0.356</td>
<td>0.393</td>
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</tbody>
</table>
### C. Accomplishments/Planned Programs ($ in Millions)

**Description:** Provide program management support, to include System Program Office operations, Systems Engineering and Technical Assistance (SETA), and Federally Funded Research and Development Centers (FFRDC).

**FY 2012 Accomplishments:**
Continued program management support, to include System Program Office operations, SETA, and engineering support from Aerospace (FFRDC).

**FY 2013 Plans:**
Continue program management support, to include System Program Office operations, SETA, and engineering support from Aerospace (FFRDC).

**FY 2014 Plans:**
Continue program management support, to include System Program Office operations, SETA, and engineering support from Aerospace (FFRDC).

<table>
<thead>
<tr>
<th>Description</th>
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<th>FY 2013</th>
<th>FY 2014</th>
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<tbody>
<tr>
<td><strong>Title:</strong> Standard Space Trainer</td>
<td>0.000</td>
<td>0.000</td>
<td>4.474</td>
</tr>
<tr>
<td><strong>Description:</strong> Develops the Standard Space Trainer (SST) application for the spacelift ranges. SST is the AFSPC/CC-directed training system for all Combat Mission Ready (CMR) space systems. It provides a common platform for all space operational training systems for both AFSPC and AETC. The Spacelift Range SST will be developed to support CMR training for the ranges’ Aerospace Control Officer (ACO), Range Control Officer (RCO)/Range Operations Commander (ROC), Mission Flight Control Officer (MFCO) and Launch Weather Officer (LWO) positions.</td>
<td></td>
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</tbody>
</table>

| **FY 2012 Accomplishments:** | N/A | | |
| **FY 2013 Plans:** | N/A | | |
| **FY 2014 Plans:** | Begins development of Standard Space Trainer application for ranges to provide more responsive, cost effective, and adaptive training capability than current training on operational system. | | |

**Accomplishments/Planned Programs Subtotals**

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<tr>
<th></th>
<th>FY 2012</th>
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<tbody>
<tr>
<td></td>
<td>9.245</td>
<td>8.760</td>
<td>13.345</td>
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</table>
E. Acquisition Strategy
The AF will use competitively awarded, complementary contracts managed by the Space and Missile Systems Center (SMC) to modernize and sustain the ranges in FY14 on a minimal-interference basis as they continue to support operational launches and tests. These include the new Launch and Test Range System Integrated Support Contract (LISC) to be awarded in FY14, the Systems Engineering and Integration (SE&I) contract to be re-awarded in FY14, and the new Standard Space Trainer contract to be awarded in FY14. Additionally, SMC will obtain program management support via the Aerospace (FFRDC) contract.

F. Performance Metrics
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.
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**Exhibit R-3, RDT&E Project Cost Analysis:** PB 2014 Air Force

### APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force  
BA 7: Operational Systems Development  

### R-1 ITEM NOMENCLATURE

PE 0305182F: Spacelift Range System (SPACE)  

### PROJECT

674137: Launch and Test Range System (LTRS) Modernization

**DATE:** April 2013

### Product Development ($ in Millions)

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<th>FY 2014 OCO</th>
<th>FY 2014 Total</th>
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<tr>
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<th>FY 2012</th>
<th>FY 2013</th>
<th>FY 2014 Base</th>
<th>FY 2014 OCO</th>
<th>FY 2014 Total</th>
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<td></td>
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<td></td>
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<td>Cost</td>
<td>Award Date</td>
<td>Cost</td>
<td>Award Date</td>
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<td>Nov 2011</td>
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<td>0.356</td>
<td>0.393</td>
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PE 0305182F: Spacelift Range System (SPACE)  
Air Force  

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Page 6 of 10  
R-1 Line #209
### Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force

**UNCLASSIFIED**

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<th>PROJECT</th>
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**Remarks**
### R-1 Item Nomenclature

- **PE 0305182F**: Spacelift Range System (SPACE)
- **PROJECT**: 674137: Launch and Test Range System (LTRS) Modernization

### Appropriation/Budget Activity

- **APPROPRIATION/BUDGET ACTIVITY**
  - 3600: Research, Development, Test & Evaluation, Air Force
  - BA 7: Operational Systems Development

### Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force

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<th>FY16</th>
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<td>WR Mission Flight Control Center</td>
<td>WR Pillar Pt A TO</td>
<td>WR Oak B TO</td>
<td>WR Oak A TO</td>
<td>WR Mission Flight Control Center</td>
<td>WR Mission Flight Control Center</td>
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<tr>
<td><strong>Telemetry Site Instrumentation</strong></td>
<td></td>
<td>ER Tel-IV A TO</td>
<td></td>
<td></td>
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<tr>
<td><strong>Metric Tracking</strong></td>
<td>Radar Site Instrumentation</td>
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<td><strong>Command Destruct</strong></td>
<td>Command Site Instrumentation</td>
<td>ER Cape 1B TO</td>
<td>WR CT-110</td>
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<tr>
<td><strong>Communications</strong></td>
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<td>RFP</td>
<td>Contract Award</td>
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<td><strong>Standard Space Trainer</strong></td>
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### Note:

- Schedule represents integrated view of RDT&E and OPAF funded modernization/sustainment efforts.
### Schedule Details

<table>
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<td>- WR Mission Flight Control Center IOC</td>
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<td>2</td>
<td>2014</td>
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## R-1 ITEM NOMENCLATURE

**PE 0305182F: Spacelift Range System (SPACE)**

## PROJECT

**674137: Launch and Test Range System (LTRS) Modernization**

### Start and End Dates

<table>
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<th>Year</th>
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