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

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 5: System Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0101125F: Nuclear Weapons Modernization

| · · · · ·   - · · · · · · · · · · · |                    |         |                      |                 |                   |                  |         |         |         |         |                     |               |
|-------------------------------------|--------------------|---------|----------------------|-----------------|-------------------|------------------|---------|---------|---------|---------|---------------------|---------------|
| COST (\$ in Millions)               | All Prior<br>Years | FY 2012 | FY 2013 <sup>#</sup> | FY 2014<br>Base | FY 2014<br>OCO ## | FY 2014<br>Total | FY 2015 | FY 2016 | FY 2017 | FY 2018 | Cost To<br>Complete | Total<br>Cost |
| Total Program Element               | 0.000              | 91.269  | 80.200               | 67.874          | -                 | 67.874           | 200.634 | 215.976 | 210.200 | 155.121 | Continuing          | Continuing    |
| 657007: B61 LIFE EXTENSION PROGRAM  | 0.000              | 81.617  | 80.200               | 67.874          | -                 | 67.874           | 200.634 | 215.976 | 210.200 | 155.121 | 79.094              | 1,090.716     |
| 657008: LONG RANGE STAND-<br>OFF    | 0.000              | 9.652   | 0.000                | 0.000           | -                 | 0.000            | 0.000   | 0.000   | 0.000   | 0.000   | Continuing          | Continuing    |

#### MDAP/MAIS Code(s): 468

#### Note

Air Force

In FY12, B61 Life Extension Program (LEP) efforts were transferred from PE 0604222F, Nuclear Weapons Support, to PE 0101125F, Nuclear Weapon Modernization, in order to support B61 LEP development.

In FY12, LRSO efforts were transferred from PE 0101122F, Air Launched Cruise Missile, to PE 0101125F, Nuclear Weapon Modernization, in order to support LRSO development.

In FY13, LRSO efforts were transferred from PE 0101125F, Nuclear Weapon Modernization, project number 657008, to PE 0604932F, Long Range Standoff Weapon, project number 657011.

# A. Mission Description and Budget Item Justification

The purpose of this program element is to conduct and support United States Air Force (USAF) and Joint Department of Defense (DoD)- Department of Energy (DOE) acquisition activities for the modernization of nuclear weapons.

B61 Life Extension Program (LEP): The B61 LEP will extend the service life of the weapon. Provides programmatic integration of the Air Force-led, joint DoD-DOE program through the B61 LEP Project Officers Group (POG) and its subgroups. In accordance with Air Force Materiel Command mission assignment memo (dated 17 Feb 2011) and National Nuclear Security Administration (NNSA)-Air Force Nuclear Weapons Center (AFNWC) Memorandum of Understanding (MOU dated 28 June 2012), the USAF is responsible for development, acquisition & delivery of a guided tailkit assembly (TKA) and All Up Round (AUR) technical integration, system qualification & fielding of the B61-12 variant.

PE 0101125F: Nuclear Weapons Modernization

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<sup>\*</sup> FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

<sup>##</sup> The FY 2014 OCO Request will be submitted at a later date

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

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

PE 0101125F: Nuclear Weapons Modernization

BA 5: System Development & Demonstration (SDD)

The Long Range Stand Off (LRSO) effort will develop a weapon system to replace the Air Force's Air Launched Cruise Missile (ALCM), operational since 1986. The LRSO weapon system will be capable of penetrating and surviving advanced Integrated Air Defense Systems (IADS) from significant stand off range to prosecute strategic targets in support of the Air Force's global attack capability and strategic deterrence core function.

This program is in Budget Activity 5, System Development and Demonstration (SDD), because it is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production.

| B. Program Change Summary (\$ in Millions)            | FY 2012 | FY 2013 | <b>FY 2014 Base</b> | FY 2014 OCO | FY 2014 Total |
|---|---------|---------|---------------------|-------------|---------------|
| Previous President's Budget                           | 93.867  | 80.200  | 110.223             | -           | 110.223       |
| Current President's Budget                            | 91.269  | 80.200  | 67.874              | -           | 67.874        |
| Total Adjustments                                     | -2.598  | 0.000   | -42.349             | -           | -42.349       |
| <ul> <li>Congressional General Reductions</li> </ul>  | -       | 0.000   |                     |             |               |
| <ul> <li>Congressional Directed Reductions</li> </ul> | -       | 0.000   |                     |             |               |
| <ul> <li>Congressional Rescissions</li> </ul>         | 0.000   | 0.000   |                     |             |               |
| <ul> <li>Congressional Adds</li> </ul>                | -       | 0.000   |                     |             |               |
| <ul> <li>Congressional Directed Transfers</li> </ul>  | -       | 0.000   |                     |             |               |
| <ul> <li>Reprogrammings</li> </ul>                    | 0.000   | 0.000   |                     |             |               |
| SBIR/STTR Transfer                                    | -2.598  | 0.000   |                     |             |               |
| Other Adjustments                                     | 0.000   | 0.000   | -42.349             | -           | -42.349       |

# **Change Summary Explanation**

FY14: -\$42.349M Adjustment to remain synchronized with the DOE schedule (two-year First Production Unit delay directed by Nuclear Weapons Council).

PE 0101125F: Nuclear Weapons Modernization Air Force

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

R-1 ITEM NOMENCLATURE
PE 0101125F: Nuclear Weapons

PROJECT
657007: B61 LIFE EXTENSION PROGRAM

BA 5: System Development & Demonstration (SDD) Modernization

| = · · · · · · · · · · · · · · · · · · · |                    |         |                      |                 |                   |                  |         |         |         |         |                     |               |
|---|--------------------|---------|----------------------|-----------------|-------------------|------------------|---------|---------|---------|---------|---------------------|---------------|
| COST (\$ in Millions)                   | All Prior<br>Years | FY 2012 | FY 2013 <sup>#</sup> | FY 2014<br>Base | FY 2014<br>OCO ## | FY 2014<br>Total | FY 2015 | FY 2016 | FY 2017 | FY 2018 | Cost To<br>Complete | Total<br>Cost |
| 657007: B61 LIFE EXTENSION PROGRAM      | 0.000              | 81.617  | 80.200               | 67.874          | -                 | 67.874           | 200.634 | 215.976 | 210.200 | 155.121 | 79.094              | 1,090.716     |
| Quantity of RDT&E Articles              |                    | 0       | 0                    | 0               |                   | 0                | 0       | 0       | 0       | 0       |                     |               |

<sup>\*</sup> FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

#### Note

Air Force

In FY12, B61 Life Extension Program (LEP) efforts were transferred from PE 0604222F, Nuclear Weapons Support, to PE 0101125F, Nuclear Weapon Modernization.

### A. Mission Description and Budget Item Justification

B61 Life Extension Program (LEP): The B61 LEP will extend the service life of the weapon. Provides programmatic integration of the Air Force-led, joint DoD-DOE program through the B61 LEP Project Officers Group (POG) and its subgroups. In accordance with Air Force Materiel Command mission assignment memo (dated 17 Feb 2011) and National Nuclear Security Administration (NNSA)-Air Force Nuclear Weapons Center (AFNWC) Memorandum of Understanding (MOU dated 28 June 2012), the USAF is responsible for development, acquisition & delivery of a guided tailkit assembly (TKA) and All Up Round (AUR) technical integration, system qualification & fielding of the B61-12 variant.

This program is in Budget Activity 5, System Development and Demonstration (SDD), because it is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production.

| B. Accomplishments/Planned Programs (\$ in Millions)   | FY 2012 | FY 2013 | FY 2014 |
|--|---------|---------|---------|
| Title: Engineering & Manufacturing Development Contract  | 71.212  | 43.283  | 18.113  |
| <b>Description:</b> Prime contract to develop, test, integrate and nuclear certify a guided TKA in support of the B61-12 LEP.  |         |         |         |
| FY 2012 Accomplishments:  Provided B61-12 TKA development, design, test, integration, qualification and nuclear certification activities in support of the B61-12 LEP. Supported design, integration and testing of the B61-12 system and verification of requirements and validation of TKA performance. Established and implemented B61-12 TKA practices that ensure the following are met: requirements flow down, requirement allocation to hardware and software, requirements compliance matrix, system performance, reliability, maintainability, product assurance, testability, producibility and supportability. |         |         |         |
| FY 2013 Plans: Provides B61-12 TKA development, design, test, integration, qualification and nuclear certification activities in support of the B61-12 LEP. Supports design, integration and testing of the B61-12 system and verification of requirements and validation of   |         |         |         |

PE 0101125F: Nuclear Weapons Modernization

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<sup>##</sup> The FY 2014 OCO Request will be submitted at a later date

| Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force  |   |                       | DATE:  | April 2013 |         |
|---|---|-----------------------|--------|------------|---------|
| APPROPRIATION/BUDGET ACTIVITY  3600: Research, Development, Test & Evaluation, Air Force BA 5: System Development & Demonstration (SDD)   | R-1 ITEM NOMENCLATURE PE 0101125F: Nuclear Weapons Modernization  | <b>PROJEC</b> 657007: | Т      | EXTENSION  | PROGRAM |
| B. Accomplishments/Planned Programs (\$ in Millions)  |   | F                     | Y 2012 | FY 2013    | FY 2014 |
| TKA performance. Establishes and implements B61-12 TKA practices t requirement allocation to hardware and software, requirements complia product assurance, testability, producibility and supportability.  | <u> </u>  |                       |        |            |         |
| FY 2014 Plans: Continues B61-12 TKA development, design, test, integration, qualificat B61-12 LEP. Continues design, integration and testing of the B61-12 s of TKA performance. Continues B61-12 TKA practices that ensure the fallocation to hardware and software, requirements compliance matrix, s assurance, testability, producibility and supportability.   | system and verification of requirements and validation following are met: requirements flow down, requireme   | nt                    |        |            |         |
| Title: AUR Technical Integration  |   |                       | 2.255  | 11.463     | 12.981  |
| <b>Description:</b> Covers all system engineering tasks in support of AUR te program support to the B61 LEP POG.  | chnical integration, qualification & fielding, including  |                       |        |            |         |
| FY 2012 Accomplishments:  Development of B61-12 system qualification plan, warhead component integration activities. Provided support to maintain technical and prograthe AUR technical integration. Developed warhead-to-TKA interface reto maintain B61-12 aircraft compatibility with all 5 delivery platforms through Developed Compatibility Test Unit (CTUs) to support early integration elicluded B61-12 AUR technical and programmatic reviews, including demeetings, and test reviews. Also included test assessments to validate qualification; configuration management of B61-12 AUR drawings, interdevelopment of trainers and other USAF configurations. | ammatic schedules and program documents that supporting quirements and design. Provided technical expertise ough completion of a test and evaluation program. Efforts at the aircraft system integration laboratories. esign reviews, systems reviews, technical interchange models & simulation results in support of system | es                    |        |            |         |
| FY 2013 Plans: Development of B61-12 system qualification plan, warhead component integration activities. Provides support to maintain technical and prograthe AUR technical integration. Develops warhead-to-TKA interface requaintain B61-12 aircraft compatibility with all 5 delivery platforms through CTUs to support early integration efforts at the aircraft system integration programmatic reviews, including design reviews, systems reviews, technicludes test assessments to validate models & simulation results in support to maintain technical and programmatic reviews.  | ammatic schedules and program documents that suppuirements and design. Provides technical expertise to gh completion of a test and evaluation program. Devolution laboratories. Includes B61-12 AUR technical and unical interchanges meetings, and test reviews. Also  | o<br>elops            |        |            |         |

PE 0101125F: *Nuclear Weapons Modernization* Air Force

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|   | UNCLASSIFIED   |                          |               |         |  |
|---|--|--------------------------|---------------|---------|--|
| Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force  |  | DATE                     | :: April 2013 |         |  |
| APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 5: System Development & Demonstration (SDD)  R-1 ITEM NOMENCLATURE PE 0101125F: Nuclear Weapons Modernization  PROJECT 657007: B61 LIFE EXTENSION F  |  |                          |               |         |  |
| B. Accomplishments/Planned Programs (\$ in Millions)  |  | FY 2012                  | FY 2013       | FY 2014 |  |
| of B61-12 AUR drawings, interface control documents, and system speconfigurations.  | cifications; and development of trainers and other US  | AF                       |               |         |  |
| FY 2014 Plans: Continues B61-12 system qualification plan, warhead component qualificativities. Continues support to maintain technical and programmatic so technical integration. Continues to develop warhead-to-TKA interface respertise to maintain B61-12 aircraft compatibility with all 5 delivery plat program. Continues to develop CTUs to support early integration effort B61-12 AUR technical and programmatic reviews, including design reviand test reviews. Also includes test assessments to validate models & configuration management of B61-12 AUR drawings, interface control of trainers and other USAF configurations. | chedules and program documents that support the Al equirements and design. Continues to provide techn tforms through completion of a test and evaluation is at the aircraft system integration laboratories. Includews, systems reviews, technical interchanges meeting simulation results in support of system qualification; | JR<br>ical<br>des<br>gs, |               |         |  |
| Title: Aircraft Integration   |  | 1.11                     | 1 12.532      | 12.122  |  |
| <b>Description:</b> B61-12 integration with threshold aircraft, including missic weapon variant and weapon design compatibility with objective aircraft.  |  | w                        |               |         |  |
| FY 2012 Accomplishments: Acquisition planning, meeting participation and fit checks for threshold a and demonstration/validation of the Programmable Armament Control S provided fit check and design compatibility with objective aircraft. Including Vehicle System (APS), Joint Mission Planning System (JMPS), and Control System (APS), and Control System (APS).  | System (PACs) Operational Flight Program (OFP). Added development of Mission Planning upgrades to Air  | lso                      |               |         |  |
| FY 2013 Plans: Acquisition planning, meeting participation and fit checks for threshold a and demonstration/validation of the PACs OFP. Also provides fit check development of Mission Planning upgrades to APS, JMPS, and CWDS.  | k and design compatibility with objective aircraft. Incl   |                          |               |         |  |
| FY 2014 Plans: Continues meeting participation and fit checks for threshold aircraft. Codemonstration/validation of the OFP. Continues design compatibility with  |  | rades.                   |               |         |  |
| Title: Test Support   |  | 0.10                     | 0 6.552       | 18.468  |  |
| <b>Description:</b> Test activities & support for TKA design validation & verification qualification (includes design & operational certification activities)   |  | JR                       |               |         |  |

PE 0101125F: *Nuclear Weapons Modernization* Air Force

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| Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force   |   |                   | DATE:   | April 2013 |         |
|--|---|-------------------|---|------------|---------|
| APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 5: System Development & Demonstration (SDD)   | R-1 ITEM NOMENCLATURE PE 0101125F: Nuclear Weapons Modernization  |                   | PROJECT<br>657007: <i>B61 LIFE EXTENSION PROGRA</i> |            |         |
| B. Accomplishments/Planned Programs (\$ in Millions)   |   |                   | FY 2012   | FY 2013    | FY 2014 |
| FY 2012 Accomplishments: Test activities & support for TKA design validation & verification and nuclear qualification (includes design & operational certification activities).  | clear certification, as well as B61-12 AUR system   |                   |   |            |         |
| FY 2013 Plans: Test planning and execution activities to support B61-12 weapon develor Provides ground test activities to verify warhead to tailkit integration to in equipment fit check activities. Provides flight testing to verify aircraft flight provides for the development and delivery of necessary bomb assembling.  | nclude wind tunnel testing. Provides aircraft and sught environments in support of weapon developmen  | pport<br>nt. Also |   |            |         |
| FY 2014 Plans: Continues test planning and execution activities to support B61-12 weap integration. Continues ground test activities to verify warhead to tailkit aircraft and support equipment fit check activities. Continues flight test weapon development. Also, provides flight testing for tailkit and AUR denecessary bomb assemblies (BAs) to accomplish TKA test and trainer as | integration to include wind tunnel testing. Provides ing to verify aircraft flight environments in support cesign verification. Continues development and deli- | of                |   |            |         |
| Title: Program Office Support  |   |                   | 6.939   | 6.370      | 6.190   |
| <b>Description:</b> System engineering & business management support to c Directorate (AFLCMC/EB)) and other PMA.  | distributed program office (AFNWC & AFLCMC Arn  | nament            |   |            |         |
| FY 2012 Accomplishments: System engineering & business management support to distributed production (AFLCMC/EB)) and other PMA.  | gram office (AFNWC & AFLCMC Armament Direct   | orate             |   |            |         |
| FY 2013 Plans: System engineering & business management support to distributed production (AFLCMC/EB)) and other PMA.  | gram office (AFNWC & AFLCMC Armament Direct   | orate             |   |            |         |
| FY 2014 Plans: System engineering & business management support to distributed production (AFLCMC/EB)) and other PMA.  | gram office (AFNWC & AFLCMC Armament Direct   | orate             |   |            |         |
|  | Accomplishments/Planned Programs S  | ubtotals          | 81.617  | 80.200     | 67.874  |

PE 0101125F: *Nuclear Weapons Modernization* Air Force

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

3600: Research, Development, Test & Evaluation, Air Force PE 0101125F: Nuclear Weapons 657007: B61 LIFE EXTENSION PROGRAM

BA 5: System Development & Demonstration (SDD) Modernization

C. Other Program Funding Summary (\$ in Millions)

FY 2014 FY 2014 FY 2014 Cost To Line Item FY 2012 FY 2013 OCO FY 2015 FY 2016 FY 2017 FY 2018 Complete Total Cost **Base** Total • RDT&E: BA 05: 0604222F: 0.000 Continuing Continuing 0.000 0.000 0.000 0.000 0.000 0.000 0.000

Funding prior to FY12 was contained in PE0604222F. Prior Year funding was \$31.328M.

Remarks

Funding prior to FY12 was contained in PE0604222F. Prior Year funding was \$31.328M.

#### **D. Acquisition Strategy**

Full and open competition as approved by the MDA.

#### **E. 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.

PE 0101125F: Nuclear Weapons Modernization

Air Force Page 7 of 17

DATE: April 2013 Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force APPROPRIATION/BUDGET ACTIVITY **R-1 ITEM NOMENCLATURE PROJECT** 3600: Research, Development, Test & Evaluation, Air Force PE 0101125F: Nuclear Weapons 657007: B61 LIFE EXTENSION PROGRAM BA 5: System Development & Demonstration (SDD) Modernization FY 2014 FY 2014 FY 2014 **Product Development (\$ in Millions)** oco FY 2012 FY 2013 Base Total Contract Target Method Performing All Prior Award Award Award Award **Cost To** Total Value of **Cost Category Item** & Type Activity & Location Years Cost Date Date Cost Date Cost Date Complete Contract Cost Cost Cost **B61 LEP EMD Contract** C/CPIF Boeina: 0.000 71.212 Nov 2012 43.283 Jun 2013 18.113 Nov 2013 18.113 350.147 482.755 TBD Subtotal 0.000 71.212 43.283 18.113 0.000 18.113 350.147 482.755 FY 2014 FY 2014 FY 2014 Support (\$ in Millions) oco Total FY 2012 FY 2013 Base Contract Target Method Performing All Prior Value of Award Award Award Award **Cost To** Total **Cost Category Item** & Type **Activity & Location** Years Cost Date Cost Date Cost Date Cost Date Cost Complete Cost Contract **AUR Technical Integration MIPR** Various:, 0.000 2.255 Apr 2012 11.463 Apr 2013 12.981 Apr 2014 12.981 57.522 84.221 12.532 Mar 2013 Oct 2014 226.529 252.294 Aircraft Integration **MIPR** Various:. 0.000 1.111 Jun 2012 12.122 12.122 Subtotal 0.000 3.366 23.995 25.103 0.000 25.103 284.051 336.515 FY 2014 FY 2014 FY 2014 Test and Evaluation (\$ in Millions) oco FY 2012 FY 2013 Base Total Contract Target Method All Prior **Cost To** Value of Performing Award Award Award Award Total **Activity & Location** Cost **Cost Category Item** & Type Years Date Cost Date Cost Date Cost Date Cost Complete Cost Contract Test Support for B61 LEP **MIPR** RTO:. 0.000 0.100 Oct 2012 6.552 Jun 2013 18.468 Jun 2014 18.468 210.675 235.795 Development Subtotal 0.000 0.100 6 552 18 468 0.000 18 468 210 675 235 795 FY 2014 FY 2014 FY 2014 Management Services (\$ in Millions) FY 2012 FY 2013 Base oco Total Contract Target Method Performing Award **Cost To** All Prior Award Award Award Total Value of **Cost Category Item** & Type **Activity & Location** Years Cost Date Cost Date Cost Date Cost Date Cost Complete Cost Contract **PMA** Various Not specified .:. 0.000 6 939 Oct 2011 6.370 Oct 2012 6 190 Oct 2013 6 190 16 152 35 651 TBD 0.000 6.939 6.370 6.190 0.000 6.190 16.152 35.651 Subtotal Target All Prior FY 2014 FY 2014 FY 2014 Cost To Total Value of Years FY 2012 FY 2013 Base oco Total Complete Cost Contract 81.617 80.200 67.874 0.000 **Project Cost Totals** 0.000 67.874 861.025 1.090.716

PE 0101125F: Nuclear Weapons Modernization Air Force

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force  |                    |         |  |                 |      |  | DATE: April 2013 |                     |               |                                |
|--|--------------------|---------|--|-----------------|------|--|------------------|---------------------|---------------|--------------------------------|
| APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 5: System Development & Demonstration (SDD) |                    |         | R-1 ITEM NOMENCLATURE PE 0101125F: Nuclear Weapons Modernization |                 |      | PROJECT<br>657007: <i>B61 LIFE EXTENSION PROGRAM</i> |                  |                     |               |                                |
|  | All Prior<br>Years | FY 2012 | FY 2013  | FY 2014<br>Base | FY 2 |  | FY 2014<br>Total | Cost To<br>Complete | Total<br>Cost | Target<br>Value of<br>Contract |
| Remarks  |                    |         |  |                 |      |  |                  |                     |               |                                |

PE 0101125F: Nuclear Weapons Modernization

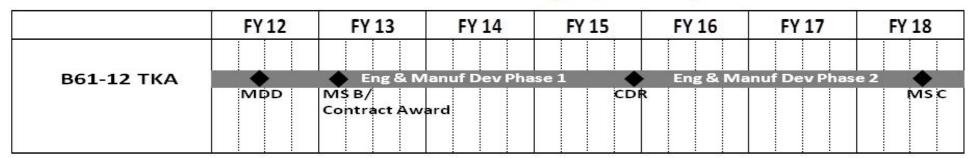
Air Force

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force DATE: April 2013

**R-1 ITEM NOMENCLATURE** APPROPRIATION/BUDGET ACTIVITY **PROJECT** PE 0101125F: Nuclear Weapons 3600: Research, Development, Test & Evaluation, Air Force

BA 5: System Development & Demonstration (SDD) Modernization 657007: B61 LIFE EXTENSION PROGRAM

# B61-12 Tailkit Assembly (TKA) Schedule



PE 0101125F: Nuclear Weapons Modernization Air Force

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

3600: Research, Development, Test & Evaluation, Air Force PE 0101125F: Nuclear Weapons 657007: B61 LIFE EXTENSION PROGRAM

BA 5: System Development & Demonstration (SDD) Modernization

# Schedule Details

|  | St      | art  | End     |      |  |
|--|---------|------|---------|------|--|
| Events   | Quarter | Year | Quarter | Year |  |
| Milestone B Decision                             | 1       | 2013 | 1       | 2013 |  |
| Engineering & Manufacturing Development Contract | 1       | 2013 | 4       | 2018 |  |
| Milestone C Decision                             | 3       | 2018 | 3       | 2018 |  |

PE 0101125F: *Nuclear Weapons Modernization*Air Force

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 5: System Development & Demonstration (SDD)

COST (\$ in Millions)

All Prior

DATE: April 2013

R-1 ITEM NOMENCLATURE
PE 0101125F: Nuclear Weapons
Modernization

FY 2014
FY 2014
FY 2014
FY 2014
FY 2014
FY 2014

| COST (\$ in Millions)            | All Prior<br>Years | FY 2012 | FY 2013 <sup>#</sup> | FY 2014<br>Base | FY 2014<br>OCO ## | FY 2014<br>Total | FY 2015 | FY 2016 | FY 2017 | FY 2018 | Cost To<br>Complete | Total<br>Cost |
|----------------------------------|--------------------|---------|----------------------|-----------------|-------------------|------------------|---------|---------|---------|---------|---------------------|---------------|
| 657008: LONG RANGE STAND-<br>OFF | 0.000              | 9.652   | 0.000                | 0.000           | -                 | 0.000            | 0.000   | 0.000   | 0.000   | 0.000   | Continuing          | Continuing    |
| Quantity of RDT&E Articles       | 0                  | 0       | 0                    | 0               |                   | 0                | 0       | 0       | 0       | 0       |                     |               |

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

#### Note

Air Force

In FY2012 LRSO efforts were transferred from PE 0101122F, Air Launched Cruise Missile, project number 674797, to PE 0101125F, Nuclear Weapon Modernization, project number 657008 in order to support LRSO development.

In FY2013 LRSO efforts were transferred from PE 0101125F, Nuclear Weapon Modernization, project number 657008, to PE 0604932F, Long Range Stand Off, project number 657011, in order to support LRSO development.

# A. Mission Description and Budget Item Justification

The Long Range Stand Off (LRSO) effort will develop a weapon system to replace the Air Force's Air Launched Cruise Missile (ALCM), operational since 1986. The LRSO weapon system will be capable of penetrating and surviving advanced Integrated Air Defense Systems (IADS) from significant stand off range to prosecute strategic targets in support of the Air Force's global attack capability and strategic deterrence core function.

This program is in Budget Activity 5, System Development and Demonstration (SDD), because it is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production.

| B. Accomplishments/Planned Programs (\$ in Millions)  | FY 2012 | FY 2013 | FY 2014 |
|---|---------|---------|---------|
| Title: Materiel Solution Analysis (MSA) & AoA   | 9.652   | 0.000   | 0.000   |
| Description: Conduct LRSO MSA/AoA activities.   |         |         |         |
| FY 2012 Accomplishments: Conducted LRSO AoA analysis. Activities included: Concept refinement, technology analyses, modeling and simulation support, engineering studies, program cost and schedule estimation, acquisition strategy development, risk reduction efforts, initial requirements definition, Milestone A preparation to include development of MSA exit/Technology Development (TD) entrance documentation. |         |         |         |
| FY 2013 Plans:  |         |         |         |

PE 0101125F: Nuclear Weapons Modernization

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<sup>##</sup> The FY 2014 OCO Request will be submitted at a later date

| Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force | DATE: April 2013             |                |                     |
|--|------------------------------|----------------|---------------------|
| APPROPRIATION/BUDGET ACTIVITY                                | R-1 ITEM NOMENCLATURE        | <b>PROJECT</b> |                     |
| 3600: Research, Development, Test & Evaluation, Air Force    | PE 0101125F: Nuclear Weapons | 657008: L0     | ONG RANGE STAND-OFF |
| BA 5: System Development & Demonstration (SDD)               | Modernization                |                |                     |

| B. Accomplishments/Planned Programs (\$ in Millions)   | FY 2012 | FY 2013 | FY 2014 |
|--|---------|---------|---------|
| Effort moved to PE 64932F - Long Range Standoff Weapon |         |         |         |
| Accomplishments/Planned Programs Subtotals             | 9.652   | 0.000   | 0.000   |

# C. Other Program Funding Summary (\$ in Millions)

|                             |         |         | FY 2014     | FY 2014 | FY 2014      |         |         |         |         | Cost To    |                   |
|-----------------------------|---------|---------|-------------|---------|--------------|---------|---------|---------|---------|------------|-------------------|
| <u>Line Item</u>            | FY 2012 | FY 2013 | <b>Base</b> | OCO     | <u>Total</u> | FY 2015 | FY 2016 | FY 2017 | FY 2018 | Complete   | <b>Total Cost</b> |
| • RDT&E: BA05: PE 0604932F: | 0.000   | 2.004   | 5.000       |         | 5.000        | 40.500  | 203.600 | 349.300 | 440.300 | Continuing | Continuing        |
| Long Range Standoff Weapon  |         |         |             |         |              |         |         |         |         |            |                   |

# Remarks

# **D. Acquisition Strategy**

Development of the LRSO acquisition/contract strategy continues to evolve pending the completion of the AoA and the evaluation of alternative weapon system concepts.

#### **E. 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.

PE 0101125F: *Nuclear Weapons Modernization*Air Force

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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 5: System Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0101125F: Nuclear Weapons

Modernization

PROJECT

657008: LONG RANGE STAND-OFF

DATE: April 2013

| Product Development (\$ in Millions) |                              |                                   | FY 2               | 2012  | FY 2          | 2013  |               | 2014<br>ise | FY 2          |       | FY 2014<br>Total |       |                     |               |                                |
|--------------------------------------|------------------------------|-----------------------------------|--------------------|-------|---------------|-------|---------------|-------------|---------------|-------|------------------|-------|---------------------|---------------|--------------------------------|
| Cost Category Item                   | Contract<br>Method<br>& Type | Performing<br>Activity & Location | All Prior<br>Years | Cost  | Award<br>Date | Cost  | Award<br>Date | Cost        | Award<br>Date | Cost  | Award<br>Date    | Cost  | Cost To<br>Complete | Total<br>Cost | Target<br>Value of<br>Contract |
|                                      |                              | Subtotal                          | 0.000              | 0.000 |               | 0.000 |               | 0.000       |               | 0.000 |                  | 0.000 | 0.000               | 0.000         | 0.000                          |

| Support (\$ in Millions)                       |                              |                                   | FY 2               | 2012  | FY 2          | 2013  | FY 2<br>Ba    | 2014<br>ise | FY 2          |       | FY 2014<br>Total |       |            |               |                                |
|--|------------------------------|-----------------------------------|--------------------|-------|---------------|-------|---------------|-------------|---------------|-------|------------------|-------|------------|---------------|--------------------------------|
| Cost Category Item                             | Contract<br>Method<br>& Type | Performing<br>Activity & Location | All Prior<br>Years | Cost  | Award<br>Date | Cost  | Award<br>Date | Cost        | Award<br>Date | Cost  | Award<br>Date    | Cost  | Cost To    | Total<br>Cost | Target<br>Value of<br>Contract |
| Materiel Solution Analysis<br>Phase Activities | Various                      | Various:Various,                  | 0.000              | 9.652 | Dec 2011      | 0.000 |               | 0.000       |               | -     |                  | 0.000 | Continuing | Continuing    | TBD                            |
|  |                              | Subtotal                          | 0.000              | 9.652 |               | 0.000 |               | 0.000       |               | 0.000 |                  | 0.000 |            |               |                                |

#### Remarks

In FY11, LRSO efforts were funded in PE 0101122F, Air Launched Cruise Missile, project number 674797.

**Project Cost Totals** 

0.000

9.652

In FY13, LRSO efforts were transferred from PE 0101125F, Nuclear Weapon Modernization, project number 657008, to PE 0604932F, Long Range Stand Off, project number 657011.

| Test and Evaluation       | (\$ in Milli                 | ons)                              |                    | FY 2       | 012           | FY 2       | 013           | FY 2<br>Ba |               | FY 2       |               | FY 2014<br>Total |                     |               |                                |
|---------------------------|------------------------------|-----------------------------------|--------------------|------------|---------------|------------|---------------|------------|---------------|------------|---------------|------------------|---------------------|---------------|--------------------------------|
| Cost Category Item        | Contract<br>Method<br>& Type | Performing<br>Activity & Location | All Prior<br>Years | Cost       | Award<br>Date | Cost       | Award<br>Date | Cost       | Award<br>Date | Cost       | Award<br>Date | Cost             | Cost To<br>Complete | Total<br>Cost | Target<br>Value of<br>Contract |
|                           |                              | Subtotal                          | 0.000              | 0.000      |               | 0.000      |               | 0.000      |               | 0.000      |               | 0.000            | 0.000               | 0.000         | 0.000                          |
| <b>Management Service</b> | es (\$ in M                  | illione)                          |                    |            |               |            |               | FY 2       | -             | FY 2       |               | FY 2014          |                     |               |                                |
| gociii. co                | νου (Ψ III III               | 11110113)                         |                    | FY 2       | 012           | FY 2       | 013           | Ba         | se            | OC         | o             | Total            |                     |               |                                |
|                           | Contract<br>Method           | Performing                        | All Prior          |            | Award         |            | Award         |            | Award         |            | Award         |                  | Cost To             | Total<br>Cost | Target Value of                |
| Cost Category Item        | Contract                     | •                                 | Years              | Cost 0.000 |               | Cost 0.000 |               | Cost 0.000 |               | Cost 0.000 |               | Cost 0.000       | Cost To<br>Complete | Total<br>Cost | Value of<br>Contract           |

PE 0101125F: *Nuclear Weapons Modernization* Air Force

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0.000

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0.000

0.000

0.000

| Exhibit R-3, RDT&E Project Cost Analysis: PB  | 2014 Air F | orce            |  |                              |                     | DATE                    | : April 20                     | 13    |    |
|---|------------|-----------------|--|------------------------------|---------------------|-------------------------|--------------------------------|-------|----|
| APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation BA 5: System Development & Demonstration (SL |            |                 | R-1 ITEM NOMI<br>PE 0101125F: N<br>Modernization | ENCLATURE<br>Nuclear Weapons | -                   | ROJECT<br>57008: LONG F | RANGE ST                       | AND-O | FF |
|   | FY 2013    | FY 2014<br>Base | FY 201   | 4 FY 2014<br>Total           | Cost To<br>Complete |                         | Target<br>Value of<br>Contract |       |    |
| Remarks   |            |                 |  |                              |                     |                         |                                |       |    |

PE 0101125F: Nuclear Weapons Modernization

Air Force

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

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 5: System Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

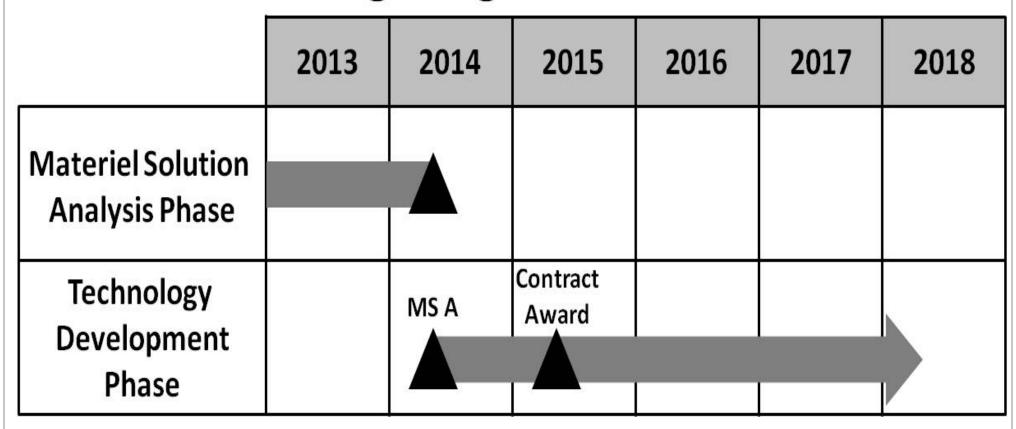
PE 0101125F: Nuclear Weapons

Modernization

PROJECT

657008: LONG RANGE STAND-OFF

# **Long Range Stand-Off**



PE 0101125F: Nuclear Weapons Modernization Air Force

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

3600: Research, Development, Test & Evaluation, Air Force PE 0101125F: Nuclear Weapons 657008: LONG RANGE STAND-OFF

BA 5: System Development & Demonstration (SDD) Modernization

# Schedule Details

|                                  | St      | End  |         |      |
|----------------------------------|---------|------|---------|------|
| Events                           | Quarter | Year | Quarter | Year |
| Materiel Solution Analysis Phase | 1       | 2012 | 2       | 2014 |
| Milestone A Decision             | 2       | 2014 | 2       | 2014 |
| Technology Development Phase     | 2       | 2014 | 4       | 2018 |
| Contract Award                   | 2       | 2015 | 2       | 2015 |

PE 0101125F: *Nuclear Weapons Modernization* Air Force

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