

| RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit) | | | | | | | | | DATE February 2003 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------------|---------------------|---------------------|---------------------|---|---------------------|---------------------|---------------------|------------------------------|------------|--|----------------|----------------|----------------|-------------------|---------------------------------|---------|---------|---------|------------|------------------------|---------|---------|--|--|---------------------------------------|--|--|--|--|-------------------------------------|--|--------|--|--------|---------------------------------------|--|--|--|--|---|--|---------|--|---------|------------------------------|--|--|--|--|----------------|--------|--|--|--------|
| BUDGET ACTIVITY 05 - System Development and Demonstration (SDD) | | | | | PE NUMBER AND TITLE 0604239F F-22 EMD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COST (\$ in Thousands) | FY 2002 Actual | FY 2003 Estimate | FY 2004 Estimate | FY 2005 Estimate | FY 2006 Estimate | FY 2007 Estimate | FY 2008 Estimate | FY 2009 Estimate | Cost to Complete | Total Cost | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Program Element (PE) Cost | 877,273 | 839,635 | 620,740 | 210,000 | 76,000 | 0 | 0 | 0 | 0 | 25,666,079 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4069 Advanced Tactical Fighter FSD | 728,403 | 839,635 | 620,740 | 210,000 | 76,000 | 0 | 0 | 0 | 0 | 24,085,499 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4874 PRTVII Aircraft Acquisition | 148,870 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,580,580 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quantity of RDT&E Articles | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>(U) <u>A. Mission Description</u> The F/A-22 is designed to penetrate enemy airspace and achieve a first look, first kill capability against multiple targets. The F/A-22 is characterized by a low observable, highly maneuverable airframe, advanced integrated avionics, and aerodynamic performance that allows supersonic cruise without the use of afterburner. The F/A-22 is currently in the Engineering and Manufacturing Development (EMD) phase of acquisition. The Defense Acquisition Board (DAB) approved Low Rate Initial Production (LRIP) Aug 01.</p> <p>(U) <u>B. Budget Activity Justification</u> This program is in Budget Activity 5, System Development and Demonstration, because the F/A-22 Program is developing the next-generation air dominance fighter for the USAF to counter emerging worldwide threats.</p> <p>(U) <u>C. Program Change Summary (\$ in Thousands)</u></p> <table style="width: 100%; margin-top: 10px;"> <thead> <tr> <th></th> <th style="text-align: right;"><u>FY 2002</u></th> <th style="text-align: right;"><u>FY 2003</u></th> <th style="text-align: right;"><u>FY 2004</u></th> <th style="text-align: right;"><u>Total Cost</u></th> </tr> </thead> <tbody> <tr> <td>(U) Previous President's Budget</td> <td style="text-align: right;">881,556</td> <td style="text-align: right;">627,266</td> <td style="text-align: right;">250,000</td> <td style="text-align: right;">24,801,255</td> </tr> <tr> <td>(U) Appropriated Value</td> <td style="text-align: right;">881,556</td> <td style="text-align: right;">627,266</td> <td></td> <td></td> </tr> <tr> <td>(U) Adjustments to Appropriated Value</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> a. Congressional/General Reductions</td> <td></td> <td style="text-align: right;">-6,631</td> <td></td> <td style="text-align: right;">-9,070</td> </tr> <tr> <td> b. Small Business Innovative Research</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> c. Omnibus or Other Above Threshold Reprogram</td> <td></td> <td style="text-align: right;">219,000</td> <td></td> <td style="text-align: right;">219,000</td> </tr> <tr> <td> d. Below Threshold Reprogram</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> e. Rescissions</td> <td style="text-align: right;">-4,283</td> <td></td> <td></td> <td style="text-align: right;">-1,844</td> </tr> </tbody> </table> | | | | | | | | | | | | <u>FY 2002</u> | <u>FY 2003</u> | <u>FY 2004</u> | <u>Total Cost</u> | (U) Previous President's Budget | 881,556 | 627,266 | 250,000 | 24,801,255 | (U) Appropriated Value | 881,556 | 627,266 | | | (U) Adjustments to Appropriated Value | | | | | a. Congressional/General Reductions | | -6,631 | | -9,070 | b. Small Business Innovative Research | | | | | c. Omnibus or Other Above Threshold Reprogram | | 219,000 | | 219,000 | d. Below Threshold Reprogram | | | | | e. Rescissions | -4,283 | | | -1,844 |
| | <u>FY 2002</u> | <u>FY 2003</u> | <u>FY 2004</u> | <u>Total Cost</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (U) Previous President's Budget | 881,556 | 627,266 | 250,000 | 24,801,255 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (U) Appropriated Value | 881,556 | 627,266 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (U) Adjustments to Appropriated Value | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| a. Congressional/General Reductions | | -6,631 | | -9,070 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| b. Small Business Innovative Research | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| c. Omnibus or Other Above Threshold Reprogram | | 219,000 | | 219,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| d. Below Threshold Reprogram | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| e. Rescissions | -4,283 | | | -1,844 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

05 - System Development and Demonstration (SDD)**0604239F F-22 EMD**(U) **C. Program Change Summary (\$ in Thousands) Continued**

| | <u>FY 2002</u> | <u>FY 2003</u> | <u>FY 2004</u> | <u>Total Cost</u> |
|---|----------------|----------------|----------------|-------------------|
| (U) Adjustments to Budget Years Since FY 2003 PBR | | | 370,740 | 656,705 |
| (U) Current Budget Submit/FY 2004 PBR | 877,273 | 839,635 | 620,740 | 25,666,079 |

(U) **Significant Program Changes:**

EMD budget was increased in FY03 and FY04 to fund the increase in EMD Estimate at Completion. The already submitted Above Threshold Reprogramming for FY03 reprograms FY03 RDT&E Modernization funds (PE 27138F) and Production funds (PE 27219F) to complete this action. For FY04, USAF internally funded the EMD increase within F/A-22 Total Obligation Authority (TOA) by realigning F/A-22 Production funds (PE 27219F).

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

05 - System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604239F F-22 EMD

PROJECT

4069

| COST (\$ in Thousands) | FY 2002 Actual | FY 2003 Estimate | FY 2004 Estimate | FY 2005 Estimate | FY 2006 Estimate | FY 2007 Estimate | FY 2008 Estimate | FY 2009 Estimate | Cost to Complete | Total Cost |
|------------------------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------|
| 4069 Advanced Tactical Fighter FSD | 728,403 | 839,635 | 620,740 | 210,000 | 76,000 | 0 | 0 | 0 | 0 | 24,085,499 |

Unit cost of RDT&E articles not separately priced (NSP).

* Total Cost includes \$3,779,811,000 of Demonstration and Validation funding prior to FY 1992 funded in PE 0603230F.

**EMD budget was increased in FY03 and FY04 to fund the increase in EMD Estimate at Completion. The already submitted Above Threshold Reprogramming for FY03 reprograms FY03 RDT&E Modernization funds (PE 27138F) and Production funds (PE 27219F) to complete this action. For FY04, USAF internally funded the EMD increase within F/A-22 Total Obligation Authority (TOA) by realigning F/A-22 Production funds (PE 27219F).

(U) A. Mission Description

The F/A-22 is designed to penetrate enemy airspace and achieve a first look, first kill capability against multiple targets. The F/A-22 is characterized by a low observable, highly maneuverable airframe, advanced integrated avionics, and aerodynamic performance that allows supersonic cruise without the use of afterburner. The F/A-22 is currently in the Engineering and Manufacturing Development (EMD) phase of acquisition. The Defense Acquisition Board (DAB) approved Low Rate Initial Production (LRIP) Aug 01.

The EMD phase effort includes delivery of nine flight test vehicles and two ground test vehicles (static and fatigue); delivery of 25 flight qualified engines; integration and test of the EMD avionics suite including air-to-surface provision; development and test of the F/A-22 weapons system support and training system; and updating the YF-22 Avionics Flying Laboratory with EMD assets and software to become an avionics integration Flying Test Bed (FTB).

This program is in Budget Activity 5, System Development and Demonstration, because the F/A-22 Program is developing the next-generation air dominance fighter for the USAF to counter emerging worldwide threats.

The following are representative activities of efforts being accomplished in the given fiscal year.

(U) FY 2002 (\$ in Thousands)

- (U) \$0 Accomplishment/Planned Program
- (U) \$431,237 Air Vehicle
- Completed full-scale airframe static testing. (NSP)
 - Continued full-scale airframe structural testing and analysis. (NSP)
 - Completed assembly of EMD aircraft #4007-4009. (NSP)

Project 4069

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Exhibit R-2A (PE 0604239F)

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| RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit) | | DATE February 2003 |
|---|--------------------------|----------------------------|
| BUDGET ACTIVITY | PE NUMBER AND TITLE | PROJECT |
| 05 - System Development and Demonstration (SDD) | 0604239F F-22 EMD | 4069 |
| <p>(U) <u>A. Mission Description Continued</u></p> <p>(U) <u>FY 2002 (\$ in Thousands) Continued</u></p> <p>(U) \$132,466 Avionics</p> <ul style="list-style-type: none"> - Continued flight test and flight test support. (NSP) - Continued structural certification analysis activities. (NSP) - Completed avionics software Block 3.0 flight testing. (NSP) - Completed Avionics Integration Lab (AIL) Block 3.1.0 integration. (NSP) - Completed Block 3.1.0 Flight Test Bed (FTB) testing. (NSP) - Initiated and completed avionics software Block 3.1.0 flight testing. (NSP) - Initiated AIL Block 3.1.1 integration. (NSP) - Initiated Block 3.1.1 FTB testing. (NSP) - Continued incorporating avionics software/hardware into the FTB. (NSP) - Continued Diminishing Manufacturing Sources (DMS) redesign, requalification and retesting activities. (NSP) --Completed Block 4.0 Bid & Proposal. (NSP) <p>(U) \$18,300 Engine</p> <ul style="list-style-type: none"> - Continued verification of engine support system products. (NSP) - Continued to test flight test engines. (NSP) - Continued Verification Requirements Complete (VRC) activities. (NSP) - Continued production engine configuration development testing. (NSP) - Completed Initial Service Release (ISR) Milestone activities. <p>(U) \$146,400 Other Government Cost</p> <ul style="list-style-type: none"> - Continued flight test and flight test support at Edwards AFB. - Continued aperture measurements at Rome Labs. - Continued engine testing at Arnold Engineering Development Center (AEDC). - Completed live fire testing at Air Force Research Labs (AFRL). - Mission support of the SPO; travel, computer costs, misc contracts, etc. <p>(U) \$728,403 Total</p> | | |
| Project 4069 | Page 4 of 15 Pages | Exhibit R-2A (PE 0604239F) |

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| RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit) | | DATE February 2003 |
|--|--|-------------------------------|
| BUDGET ACTIVITY 05 - System Development and Demonstration (SDD) | PE NUMBER AND TITLE 0604239F F-22 EMD | PROJECT 4069 |
| <div style="margin-bottom: 10px;">(U) <u>A. Mission Description Continued</u></div> <div style="margin-bottom: 10px;">(U) <u>FY 2003 (\$ in Thousands)</u></div> <div style="margin-bottom: 10px;"> (U) \$0 Accomplishment/Planned Program (U) \$331,900 Air Vehicle <ul style="list-style-type: none"> - Continue full-scale airframe structural testing and analysis. (NSP) - Continue flight test and flight test support. (NSP) - Continue structural certification analysis activities. (NSP) </div> <div style="margin-bottom: 10px;"> (U) \$276,500 Avionics <ul style="list-style-type: none"> - Complete AIL Block 3.1.1 Integration. (NSP) - Complete Block 3.1.1 FTB testing. (NSP) - Initiate AIL Block 3.1.2 Integration. (NSP) - Initiate and complete Block 3.1.2 FTB testing - Initiate and complete DIOT&E OFP FTB testing. (NSP) - Initiate DIOT&E OFP flight testing. (NSP) - Completed incorporating avionics software/hardware into the FTB. (NSP) - Continued DMS redesign, requalification and retesting activities. (NSP) </div> <div style="margin-bottom: 10px;"> (U) \$59,000 Engine <ul style="list-style-type: none"> - Continue and complete verification of engine support system products. (NSP) - Continue to support and test flight test engines. (NSP) - Continue Verification Requirements Complete (VRC) activities. (NSP) - Continue and complete production engine configuration development testing. (NSP) - Adjust engine support capacity at Edwards AFB consistent with DIOT&E start date and flight test extension. (NSP) </div> <div style="margin-bottom: 10px;"> (U) \$172,235 Other Government Cost <ul style="list-style-type: none"> - Continue flight test and flight test support at Edwards AFB. - Continue aperture measurements at Rome Labs. - Continue engine testing at AEDC. - Complete live fire testing at Air Force Research Labs (AFRL). - Mission support of the SPO; travel, computer costs, misc contracts, etc. </div> <div style="margin-bottom: 10px;"> (U) \$839,635 Total </div> | | |
| <div style="display: flex; justify-content: space-between;"> Project 4069 Page 5 of 15 Pages Exhibit R-2A (PE 0604239F) </div> | | |

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| RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit) | | DATE February 2003 |
|--|---|------------------------------|
| BUDGET ACTIVITY 05 - System Development and Demonstration (SDD) | PE NUMBER AND TITLE 0604239F F-22 EMD | PROJECT 4069 |
| <p>(U) <u>A. Mission Description Continued</u></p> <p>(U) <u>FY 2004 (\$ in Thousands)</u></p> <p>(U) \$0 Accomplishment/Planned Program</p> <p>(U) \$226,300 Air Vehicle</p> <ul style="list-style-type: none"> - Complete full-scale airframe structural testing and analysis. (NSP) - Continue structural certification analysis activities. (NSP) - Continue EMD flight test and flight test support. (NSP) - Continue EMD structural certification analysis activities. (NSP) <p>(U) \$216,600 Avionics</p> <ul style="list-style-type: none"> - Complete DIOT&E OFP Flight Testing. (NSP) - Complete AIL Block 3.1.2 Integration. (NSP) - Initiate and complete AIL Block 3.1.3 Integration. (NSP) - Continue DMS redesign, requalification and retesting activities. (NSP) <p>(U) \$36,300 Engine</p> <ul style="list-style-type: none"> - Complete support and test of flight test engines (25 total). (NSP) - Continue Verification Requirements Complete (VRC) activities. (NSP) <p>(U) \$141,540 Other Government Cost</p> <ul style="list-style-type: none"> - Support flight test and flight test support at Edwards AFB. - Complete aperture measurements at Rome Labs. - Complete engine testing at AEDC. - Mission support of the SPO; travel, computer costs, misc contracts, etc. <p>(U) \$620,740 Total</p> <p>(U) <u>B. Project Change Summary</u></p> <p>Not Applicable</p> | | |
| <div style="display: flex; justify-content: space-between;"> Project 4069 Page 6 of 15 Pages Exhibit R-2A (PE 0604239F) </div> | | |

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| RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit) | | | | | | | | | DATE February 2003 | |
|--|----------------|-----------------|-----------------|-----------------|---|-----------------|-----------------|-----------------|------------------------------|-------------------|
| BUDGET ACTIVITY 05 - System Development and Demonstration (SDD) | | | | | PE NUMBER AND TITLE 0604239F F-22 EMD | | | | PROJECT 4069 | |
| (U) <u>C. Other Program Funding Summary (\$ in Thousands)</u> | | | | | | | | | | |
| | <u>FY 2002</u> | <u>FY 2003</u> | <u>FY 2004</u> | <u>FY 2005</u> | <u>FY 2006</u> | <u>FY 2007</u> | <u>FY 2008</u> | <u>FY 2009</u> | <u>Cost to</u> | <u>Total Cost</u> |
| | <u>Actual</u> | <u>Estimate</u> | <u>Estimate</u> | <u>Estimate</u> | <u>Estimate</u> | <u>Estimate</u> | <u>Estimate</u> | <u>Estimate</u> | <u>Complete</u> | |
| (U) PRTV II (6) | 148,870 | | | | | | | | | 1,580,580 |
| (U) F/A-22 Squadrons RDT&E (PE 0207138F) | | 66,323 | 315,784 | 375,428 | 411,671 | 640,691 | 612,655 | 561,324 | Continuing | TBD |
| (U) F/A-22 Squadrons Procurement (PE 0207138F) | | 16,027 | 41,276 | 71,691 | 10,100 | 76,586 | 134,697 | 167,108 | Continuing | TBD |
| (U) Military Construction (PE 0604239F) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39,700 |
| (U) Military Construction (PE 0207219F) | 53,442 | 42,576 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 96,018 |
| (U) Military Construction (PE 0207138F) | | | 31,164 | 40,246 | 60,070 | 96,030 | 148,700 | 93,090 | Continuing | TBD |
| (U) Aircraft Procurement (PE 0207219F) Advanced Tactical Fighter, P-1 Line Item #003** | 3,022,659 | 4,470,117 | 4,220,552 | 4,456,732 | 4,133,179 | 4,224,841 | 4,088,174 | 3,910,350 | 5,899,334 | 42,120,631 |
| (U) Munitions Procurement (PE 0207219F) | 4,311 | 6,260 | 9,480 | 9,433 | 10,922 | 10,771 | 12,027 | 12,253 | 24,726 | 102,057 |
| (U) F/A-22 Link 16 Transmit Procurement (PE 27445F) | | | | | 26,483 | 27,541 | 31,971 | 32,518 | 127,270 | 245,783 |
| PE 0207138F includes manpower authorizations, peculiar and common support equipment, necessary facilities and the associated costs specifically identified and measurable to the following: Operation, maintenance, and logistical support of the F/A-22 fighter | | | | | | | | | | |
| ** NOTE: Includes BP 10, 11, 16, 19 and Advance Buy. | | | | | | | | | | |
| (U) <u>D. Acquisition Strategy</u> | | | | | | | | | | |
| The EMD contract is Cost Plus Award Fee with Lockheed Martin Aeronautical Systems (LMAS) to produce the F/A-22 air vehicle and Pratt & Whitney (P&W) to produce the F119 engines. The engines are provided to LMAS as GFE. | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> Project 4069 Page 7 of 15 Pages Exhibit R-2A (PE 0604239F) </div> | | | | | | | | | | |

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)

0604239F F-22 EMD

4069

(U) E. Schedule Profile

| | <u>FY 2002</u> | | | | | <u>FY 2003</u> | | | | | <u>FY 2004</u> | | | |
|---|----------------|---|---|---|---|----------------|---|---|---|---|----------------|---|--|--|
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | | |
| (U) (U) Aircraft Delivered (EMD Test Article) | | * | * | | | | | | | | | | | |
| (U) (U) Aircraft Delivered (EMD Test Article) | | * | | | | | | | | | | | | |
| (U) T&E Milestones | | | | | | | | | | | | | | |
| (U) - Dedicated IOT&E | | | | | | | | X | | | | | | |

EMD = Engineering and Manufacturing Development, DAB = Defense Acquisition Board LRIP = Low Rate Initial Production, LL = Long Lead, MS = Milestone, DT&E = Developmental Test & Evaluation, IOT&E = Initial Operational Test & Evaluation

NOTE: Schedule is according to current A/C build schedule.

* - Completed

X - Planned Event

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| RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3) | | | | | | | | DATE February 2003 | | |
|---|----------------------|-------------------|-------------------|----------------|---------------------|----------------|----------------|-----------------------|------------------|----------------|
| BUDGET ACTIVITY | | | | | PE NUMBER AND TITLE | | | | PROJECT | |
| 05 - System Development and Demonstration (SDD) | | | | | 0604239F F-22 EMD | | | | 4069 | |
| (U) <u>A. Project Cost Breakdown (\$ in Thousands)</u> | | | | | | | | | | |
| | | | | | FY 2002 | | FY 2003 | | FY 2004 | |
| (U) | Air Vehicle/Avionics | | | | 563,703 | | 608,400 | | 442,900 | |
| (U) | Engine | | | | 18,300 | | 59,000 | | 36,300 | |
| (U) | Government Cost | | | | | | | | | |
| (U) | - Government Test | | | | 132,200 | | 150,835 | | 131,940 | |
| (U) | - Mission Support | | | | 11,500 | | 17,500 | | 7,000 | |
| (U) | - GFE | | | | 2,700 | | 3,900 | | 2,600 | |
| (U) | Total | | | | 728,403 | | 839,635 | | 620,740 | |
| (U) <u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u> | | | | | | | | | | |
| (U) <u>Performing Organizations:</u> | | | | | | | | | | |
| <u>Contractor or</u> | <u>Contract</u> | | | | | | | | | |
| <u>Government</u> | <u>Method/Type</u> | <u>Award or</u> | <u>Performing</u> | <u>Project</u> | | | | | | |
| <u>Performing</u> | <u>or Funding</u> | <u>Obligation</u> | <u>Activity</u> | <u>Office</u> | <u>Total Prior</u> | <u>Budget</u> | <u>Budget</u> | <u>Budget</u> | <u>Budget to</u> | <u>Total</u> |
| <u>Activity</u> | <u>Vehicle</u> | <u>Date</u> | <u>EAC</u> | <u>EAC</u> | <u>to FY 2002</u> | <u>FY 2002</u> | <u>FY 2003</u> | <u>FY 2004</u> | <u>Complete</u> | <u>Program</u> |
| <u>Product Development Organizations</u> | | | | | | | | | | |
| Lockheed (Air Veh) | C/CPAF | Aug 91 | 16,465,608 | 16,465,608 | 14,653,105 | 563,703 | 608,400 | 442,900 | 197,500 | 16,465,608 |
| Pratt & Whitney | C/CPFF | Aug 91 | 2,502,479 | 2,502,479 | 2,385,279 | 18,300 | 59,000 | 36,300 | 3,600 | 2,502,479 |
| <u>Support and Management Organizations</u> | | | | | | | | | | |
| Support Contracts | Various | Various | N/A | N/A | 15,104 | 1,500 | 1,500 | 1,500 | 1,500 | 21,104 |
| In House Support | Various | Various | N/A | N/A | 114,096 | 10,000 | 16,000 | 5,500 | 5,500 | 151,096 |
| <u>Test and Evaluation Organizations</u> | | | | | | | | | | |
| AEDC | PO | | N/A | N/A | 155,400 | 0 | 3,000 | 0 | 0 | 158,400 |
| AFFTC | PO | | N/A | N/A | 352,939 | 131,179 | 140,835 | 126,940 | 75,300 | 827,193 |
| All Other Tests | Various | Various | N/A | N/A | 98,987 | 1,021 | 7,000 | 5,000 | 0 | 112,008 |
| Project 4069 | | | | | | | | | | |
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| Exhibit R-3 (PE 0604239F) | | | | | | | | | | |

Project 4069

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Exhibit R-3 (PE 0604239F)

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| RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3) | | | | | | | DATE February 2003 | | |
|--|--------------------|-------------------|-----------------|---------------------|----------------|----------------|-----------------------|------------------|----------------|
| BUDGET ACTIVITY | | | | PE NUMBER AND TITLE | | | | PROJECT | |
| 05 - System Development and Demonstration (SDD) | | | | 0604239F F-22 EMD | | | | 4069 | |
| (U) <u>Government Furnished Property:</u> | | | | | | | | | |
| | <u>Contract</u> | | | | | | | | |
| | <u>Method/Type</u> | <u>Award or</u> | | | | | | | |
| <u>Item</u> | <u>or Funding</u> | <u>Obligation</u> | <u>Delivery</u> | <u>Total Prior</u> | <u>Budget</u> | <u>Budget</u> | <u>Budget</u> | <u>Budget to</u> | <u>Total</u> |
| <u>Description</u> | <u>Vehicle</u> | <u>Date</u> | <u>Date</u> | <u>to FY 2002</u> | <u>FY 2002</u> | <u>FY 2003</u> | <u>FY 2004</u> | <u>Complete</u> | <u>Program</u> |
| <u>Product Development Property</u> | | | | | | | | | |
| GFE | Various | Various | Various | 56,000 | 2,700 | 3,900 | 2,600 | 2,600 | 67,800 |
| <u>Support and Management Property</u> | | | | | | | | | |
| <u>Test and Evaluation Property</u> | | | | | | | | | |
| Not Applicable | | | | | | | | | |
| | | | | <u>Total Prior</u> | <u>Budget</u> | <u>Budget</u> | <u>Budget</u> | <u>Budget to</u> | <u>Total</u> |
| <u>Subtotals</u> | | | | <u>to FY 2002</u> | <u>FY 2002</u> | <u>FY 2003</u> | <u>FY 2004</u> | <u>Complete</u> | <u>Program</u> |
| Subtotal Product Development | | | | 17,094,384 | 584,703 | 671,300 | 481,800 | 203,700 | 19,035,887 |
| Subtotal Support and Management | | | | 129,200 | 11,500 | 17,500 | 7,000 | 7,000 | 172,200 |
| Subtotal Test and Evaluation | | | | 607,326 | 132,200 | 150,835 | 131,940 | 75,300 | 1,097,601 |
| Total Project | | | | 17,830,910 | 728,403 | 839,635 | 620,740 | 286,000 | 20,305,688 |
| NOTE: Total program cost for Engineering and Manufacturing Development only. Does not include \$3,779,811,000 of Demonstration and Validation funding prior to FY92. | | | | | | | | | |

Project 4069

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Exhibit R-3 (PE 0604239F)

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

05 - System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604239F F-22 EMD

PROJECT

4874

| COST (\$ in Thousands) | FY 2002 Actual | FY 2003 Estimate | FY 2004 Estimate | FY 2005 Estimate | FY 2006 Estimate | FY 2007 Estimate | FY 2008 Estimate | FY 2009 Estimate | Cost to Complete | Total Cost |
|----------------------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------|
| 4874 PRTVII Aircraft Acquisition | 148,870 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,580,580 |

(U) **A. Mission Description**

Complete test aircraft to support continued F/A-22 development and production. The PRTV II (6) Full Contract Award (Dec 99) criteria, approved by OUSD (A&T) on 23 Dec 98, required the program to demonstrate maturity prior to a contract award.

Following successful completion of all CY99 DAE criteria, the Air Force awarded contracts for PRTV II (6) and Lot 1 Advanced Buy aircraft on 30 Dec 99.

This program is in Budget Activity 5, System Development and Demonstration, because the F/A-22 Program is developing the next-generation air dominance fighter for the USAF to counter emerging worldwide threats.

(U) **FY 2002 (\$ in Thousands)**

(U) \$0 Accomplishment/Planned Program
 (U) \$148,568 Air Vehicle
 (U) \$302 Engine
 (U) \$0 Other Government Cost
 (U) \$148,870 Total

(U) **FY 2003 (\$ in Thousands)**

(U) \$0 Accomplishment/Planned Program
 (U) \$0 No Activity
 (U) \$0 Total

(U) **FY 2004 (\$ in Thousands)**

(U) \$0 Accomplishment/Planned Program
 (U) \$0 No Activity
 (U) \$0 Total

(U) **B. Project Change Summary**

Not Applicable

Project 4874

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Exhibit R-2A (PE 0604239F)

UNCLASSIFIED

| RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit) | | | | | | | | | DATE February 2003 | |
|---|----------------|-----------------|-----------------|-----------------|---|-----------------|-----------------|-----------------|------------------------------|-------------------|
| BUDGET ACTIVITY 05 - System Development and Demonstration (SDD) | | | | | PE NUMBER AND TITLE 0604239F F-22 EMD | | | | PROJECT 4874 | |
| (U) <u>C. Other Program Funding Summary (\$ in Thousands)</u> | | | | | | | | | | |
| | <u>FY 2002</u> | <u>FY 2003</u> | <u>FY 2004</u> | <u>FY 2005</u> | <u>FY 2006</u> | <u>FY 2007</u> | <u>FY 2008</u> | <u>FY 2009</u> | <u>Cost to</u> | <u>Total Cost</u> |
| | <u>Actual</u> | <u>Estimate</u> | <u>Estimate</u> | <u>Estimate</u> | <u>Estimate</u> | <u>Estimate</u> | <u>Estimate</u> | <u>Estimate</u> | <u>Complete</u> | |
| (U) AF RDT&E | 728,403 | 839,635 | 620,740 | 210,000 | 76,000 | | | | | 24,085,499 |
| (U) F/A-22 Squadrons (PE 0207138F) | | 66,323 | 315,784 | 375,428 | 411,671 | 640,691 | 612,655 | 561,324 | Continuing | TBD |
| (U) F/A-22 Squadrons Procurement (PE 0207138F) | | 16,027 | 41,276 | 71,691 | 10,100 | 76,586 | 134,697 | 167,108 | Continuing | TBD |
| (U) Military Construction (PE 0604239F) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39,700 |
| (U) Military Construction (PE 0207219F) | 53,442 | 42,576 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 96,018 |
| (U) Military Construction (PE 0207138F) | | | 31,164 | 40,246 | 60,070 | 96,030 | 148,700 | 93,090 | Continuing | TBD |
| (U) Aircraft Procurement (PE 0207219F) Advanced Tactical Fighter, P-1 Line Item #003** | 3,022,659 | 4,470,117 | 4,220,552 | 4,456,732 | 4,133,179 | 4,224,841 | 4,088,173 | 3,910,350 | 5,899,334 | 42,120,631 |
| (U) Munitions Procurement (PE 0207219F) | 4,311 | 6,260 | 9,480 | 9,433 | 10,922 | 10,771 | 12,027 | 12,253 | 24,726 | 102,057 |
| (U) F/A-22 Link 16 Transmit Procurement (PE 27445F) | | | | | 26,483 | 27,541 | 31,971 | 32,518 | 127,270 | 245,783 |
| (U) Other APPN PE 0207138F includes manpower authorizations, peculiar and common support equipment, necessary facilities and the associated costs specifically identified and measurable to the following: Operation, maintenance, and logistical support of the F/A-22 fighter. | | | | | | | | | | |
| **NOTE: Includes BP10, 11, 16, 19 and Advance Buy. | | | | | | | | | | |
| (U) <u>D. Acquisition Strategy</u> The PRTV II contract is Firm Fixed Price with Lockheed Martin Aeronautical Systems (LMAS) to produce the F/A-22 air vehicle and Pratt & Whitney (P&W) to produce the F119 engines. The engines are provided to LMAS as GFE. | | | | | | | | | | |
| Project 4874 | | | | | | | | | | |

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)**0604239F F-22 EMD****4874**(U) **E. Schedule Profile**

| <u>FY 2002</u> | | | | <u>FY 2003</u> | | | | <u>FY 2004</u> | | | |
|----------------|---|---|---|----------------|---|---|---|----------------|---|---|---|
| 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| | | | | * | X | X | | | | | |
| | | | | | X | X | | | | | |
| | | | | | X | | | | | | |

NOTE: Schedule is according to current A/C delivery schedule.

* - Completed

X - Planned

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)

0604239F F-22 EMD

4874

(U) A. Project Cost Breakdown (\$ in Thousands)

| | <u>FY 2002</u> | <u>FY 2003</u> | <u>FY 2004</u> |
|---------------------------|----------------|----------------|----------------|
| (U) Air Vehicle | 148,568 | 0 | 0 |
| (U) Engine | 302 | 0 | 0 |
| (U) Other Government Cost | 0 | 0 | 0 |
| (U) Total | 148,870 | 0 | 0 |

(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)(U) Performing Organizations:

| <u>Contractor or Government</u> | <u>Contract Method/Type</u> | <u>Award or Obligation</u> | <u>Performing Activity</u> | <u>Project Office</u> | <u>Total Prior to FY 2002</u> | <u>Budget FY 2002</u> | <u>Budget FY 2003</u> | <u>Budget FY 2004</u> | <u>Budget to Complete</u> | <u>Total Program</u> |
|---|-----------------------------|----------------------------|----------------------------|-----------------------|-------------------------------|-----------------------|-----------------------|-----------------------|---------------------------|----------------------|
| <u>Performing Activity</u> | <u>or Funding Vehicle</u> | <u>Date</u> | <u>EAC</u> | <u>EAC</u> | | | | | | |
| <u>Product Development Organizations</u> | | | | | | | | | | |
| Lockheed (Air Veh) | FFP | Dec 99 | 1,393,956 | 1,393,956 | 1,245,388 | 148,568 | 0 | 0 | 0 | 1,393,956 |
| Pratt & Whitney | FFP | Dec 99 | 180,402 | 180,402 | 180,100 | 302 | 0 | 0 | 0 | 180,402 |
| <u>Support and Management Organizations</u> | | | | | | | | | | |
| N/A | N/A | N/A | N/A | N/A | | | | | | |
| <u>Test and Evaluation Organizations</u> | | | | | | | | | | |
| N/A | N/A | N/A | N/A | N/A | | | | | | |

(U) Government Furnished Property:

| <u>Item</u> | <u>Contract Method/Type</u> | <u>Award or Obligation</u> | <u>Delivery</u> | <u>Total Prior to FY 2002</u> | <u>Budget FY 2002</u> | <u>Budget FY 2003</u> | <u>Budget FY 2004</u> | <u>Budget to Complete</u> | <u>Total Program</u> |
|--|-----------------------------|----------------------------|-----------------|-------------------------------|-----------------------|-----------------------|-----------------------|---------------------------|----------------------|
| <u>Description</u> | <u>or Funding Vehicle</u> | <u>Date</u> | <u>Date</u> | | | | | | |
| <u>Product Development Property</u> | | | | | | | | | |
| GFE | Various | Various | Various | 6,222 | 0 | 0 | 0 | 0 | 6,222 |
| <u>Support and Management Property</u> | | | | | | | | | |
| Not Applicable | N/A | N/A | N/A | | | | | | |

Project 4874

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Exhibit R-3 (PE 0604239F)

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| RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3) | | | | | DATE | |
|---|-----|-----|-----|---------------------|----------------|------------------|
| | | | | | February 2003 | |
| BUDGET ACTIVITY | | | | PE NUMBER AND TITLE | | PROJECT |
| 05 - System Development and Demonstration (SDD) | | | | 0604239F F-22 EMD | | 4874 |
| (U) <u>Government Furnished Property Continued:</u> | | | | | | |
| <u>Test and Evaluation Property</u> | | | | | | |
| Not Applicable | N/A | N/A | N/A | | | |
| | | | | <u>Total Prior</u> | <u>Budget</u> | <u>Budget</u> |
| | | | | <u>to FY 2002</u> | <u>FY 2002</u> | <u>FY 2003</u> |
| | | | | | | <u>Budget</u> |
| | | | | | | <u>FY 2004</u> |
| | | | | | | <u>Budget to</u> |
| | | | | | | <u>Complete</u> |
| | | | | | | <u>Total</u> |
| <u>Subtotals</u> | | | | | | |
| Subtotal Product Development | | | | 1,431,710 | 148,870 | 0 |
| Subtotal Support and Management | | | | | | 0 |
| Subtotal Test and Evaluation | | | | | | 0 |
| Total Project | | | | 1,431,710 | 148,870 | 0 |
| | | | | | | 0 |
| | | | | | | 1,580,580 |

Project 4874

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Exhibit R-3 (PE 0604239F)