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Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force **Date:** February 2020

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|---|---|
| Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 6: RDT&E Management Support</i> | R-1 Program Element (Number/Name) PE 0605978F / <i>Facilities Sustainment - Test and Evaluation Support</i> |
|---|---|

| COST (\$ in Millions) | Prior Years | FY 2019 | FY 2020 | FY 2021 Base | FY 2021 OCO | FY 2021 Total | FY 2022 | FY 2023 | FY 2024 | FY 2025 | Cost To Complete | Total Cost |
|---|-------------|---------|---------|--------------|-------------|---------------|---------|---------|---------|---------|------------------|------------|
| Total Program Element | - | 28.888 | 29.424 | 29.880 | 0.000 | 29.880 | 30.509 | 31.056 | 31.612 | 32.193 | Continuing | Continuing |
| 6606MR: <i>Facility Sustainment-T&E Support</i> | - | 28.888 | 29.424 | 29.880 | 0.000 | 29.880 | 30.509 | 31.056 | 31.612 | 32.193 | Continuing | Continuing |
| Quantity of RDT&E Articles | - | - | - | - | - | - | - | - | - | - | | |

A. Mission Description and Budget Item Justification

Provides resources for sustainment activities required for an inventory of Air Force Material Command (AFMC) Test and Evaluation (T&E) facilities. Facility sustainment includes regularly scheduled adjustments and inspections, preventative maintenance tasks, and emergency response and service calls for minor repairs. It also includes major repairs or replacement of facility components that are expected to occur periodically. In addition to standard facility sustainment, such as roof replacement, refinishing of wall and floor surfaces, and repairing and replacing of heating and cooling systems, this work includes inspections and repairs of heavy plant machinery in large industrial facilities. This work includes, but is not limited to, inspection and repair of high-power electrical switching gear, hydraulic, lubrication, forced-air and fluid cooling systems, high pressure vessel health monitoring, facility control and remote monitoring systems, liquid oxygen systems, steam systems, test instrumentation, and fire detection and suppression systems. Other tasks associated with facilities operations (such as custodial services, grass cutting, and landscaping, waste disposal, and the provision of central utilities) are not included. These sustainment funds support the following Air Force organizations and their associated test and evaluation facilities, including: remote locations, the 96th Test Wing (TW) at Eglin AFB, FL, Arnold Engineering and Development Complex (AEDC) at Arnold AFB, TN, AEDC's 704th Test Group (TG) at Holloman AFB, NM, AEDC's 704 TG Landing Gear Test Facility (LGTf) at Wright-Patterson AFB, OH, AEDC's Hypersonic Wind Tunnel 9 at White Oak, MD, AEDC's National Full-Scale Aerodynamics Complex (NFAC) at Moffett Field, CA, AEDC's McKinley Climatic Laboratory (MCL) at Eglin AFB, FL and the 412 Test Wing (TW) at Edwards AFB, CA.

This program is in Budget Activity 6, RDT&E Management Support because this budget activity includes research, development, test and evaluation efforts and funds to sustain and/or modernize the installations or operations required for general research, development, test and evaluation.

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| B. Program Change Summary (\$ in Millions) | FY 2019 | FY 2020 | FY 2021 Base | FY 2021 OCO | FY 2021 Total |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Previous President's Budget | 28.888 | 29.424 | 29.935 | 0.000 | 29.935 |
| Current President's Budget | 28.888 | 29.424 | 29.880 | 0.000 | 29.880 |
| Total Adjustments | 0.000 | 0.000 | -0.055 | 0.000 | -0.055 |
| • Congressional General Reductions | 0.000 | 0.000 | | | |
| • Congressional Directed Reductions | 0.000 | 0.000 | | | |
| • Congressional Rescissions | 0.000 | 0.000 | | | |
| • Congressional Adds | 0.000 | 0.000 | | | |
| • Congressional Directed Transfers | 0.000 | 0.000 | | | |
| • Reprogrammings | 0.000 | 0.000 | | | |
| • SBIR/STTR Transfer | 0.000 | 0.000 | | | |
| • Other Adjustments | 0.000 | 0.000 | -0.055 | 0.000 | -0.055 |

Change Summary Explanation

Not applicable.

| C. Accomplishments/Planned Programs (\$ in Millions) | FY 2019 | FY 2020 | FY 2021 |
|---|----------------|----------------|----------------|
|---|----------------|----------------|----------------|

| | | | |
|---|-------|-------|-------|
| <p>Title: Facility sustainment at the 96 TW.</p> <p>Description: Facility sustainment at the 96 TW.</p> <p>FY 2020 Plans: Continue to work through several hundred Direct Scheduled Work Orders (DSWs) within the test infrastructure.</p> <p>FY 2021 Plans: Continue to work through several hundred Direct Scheduled Work Orders (DSWs) within the test infrastructure.</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: Not applicable.</p> | 0.811 | 0.983 | 1.005 |
|---|-------|-------|-------|

| | | | |
|---|--------|--------|--------|
| <p>Title: Facility sustainment at the AEDC.</p> <p>Description: Facility sustainment at the AEDC.</p> <p>FY 2020 Plans: Continue to perform calendar based scheduled preventative maintenance on Engine Test Facility Plant and associated engine test cells, Propulsion Wind Tunnel Plant and associated wind tunnels, Von Karman Facility (VKF) Plant Core and associated test cells, arc heaters, rocket test facility, space chambers, and hypersonic engine test facilities, along with associated infrastructure</p> | 25.650 | 25.782 | 26.173 |
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| C. Accomplishments/Planned Programs (\$ in Millions) | FY 2019 | FY 2020 | FY 2021 |
|---|----------------|----------------|----------------|
| that supports all test operations. Sustainment project includes painting buildings, carpet replacement, heating, ventilation, air conditioning (HVAC) repairs and roof repairs throughout the 704 TG. FY 2021 Plans: Continue to perform calendar based scheduled preventative maintenance on Engine Test Facility Plant and associated engine test cells, Propulsion Wind Tunnel Plant and associated wind tunnels, Von Karman Facility (VKF) Plant Core and associated test cells, arc heaters, rocket test facility, space chambers, and hypersonic engine test facilities, along with associated infrastructure that supports all test operations. Sustainment project includes painting buildings, carpet replacement, heating, ventilation, air conditioning (HVAC) repairs and roof repairs throughout the 704 TG. FY 2020 to FY 2021 Increase/Decrease Statement: Not applicable. | | | |
| Title: Facility sustainment at the 412 TW. Description: Facility sustainment at the 412 TW. FY 2020 Plans: Continue sustainment of test unique infrastructure in 412 TW Electronic Warfare, Range, and other T&E facilities located at Edwards AFB, CA. FY 2021 Plans: Continue sustainment of test unique infrastructure in 412 TW Electronic Warfare, Range, and other T&E facilities located at Edwards AFB, CA. FY 2020 to FY 2021 Increase/Decrease Statement: Not applicable. | 2.427 | 2.659 | 2.702 |
| Accomplishments/Planned Programs Subtotals | 28.888 | 29.424 | 29.880 |

| D. Other Program Funding Summary (\$ in Millions) | | | | | | | | | | | |
|---|----------------|----------------|-------------------------------|------------------------------|--------------------------------|----------------|----------------|----------------|----------------|-----------------------------------|-------------------|
| <u>Line Item</u> | <u>FY 2019</u> | <u>FY 2020</u> | <u>FY 2021</u> <u>Base</u> | <u>FY 2021</u> <u>OCO</u> | <u>FY 2021</u> <u>Total</u> | <u>FY 2022</u> | <u>FY 2023</u> | <u>FY 2024</u> | <u>FY 2025</u> | <u>Cost To</u> <u>Complete</u> | <u>Total Cost</u> |
| • RDTE 06 PE 0604256F: <i>Threat Simulator Development</i> | 33.666 | 59.693 | 57.725 | - | 57.725 | 44.777 | 36.511 | 31.655 | 32.237 | Continuing | Continuing |
| • RDTE 06 PE 0604759F: <i>Major T&E Investment</i> | 213.273 | 106.663 | 208.680 | - | 208.680 | 207.845 | 152.044 | 159.017 | 155.705 | Continuing | Continuing |

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

| <u>Line Item</u> | <u>FY 2019</u> | <u>FY 2020</u> | <u>FY 2021</u> <u>Base</u> | <u>FY 2021</u> <u>OCO</u> | <u>FY 2021</u> <u>Total</u> | <u>FY 2022</u> | <u>FY 2023</u> | <u>FY 2024</u> | <u>FY 2025</u> | <u>Cost To</u> <u>Complete</u> | <u>Total Cost</u> |
|--|----------------|----------------|-------------------------------|------------------------------|--------------------------------|----------------|----------------|----------------|----------------|-----------------------------------|-------------------|
| • RDTE 06 PE 0605807F: <i>Test & Evaluation Support</i> | 692.784 | 717.895 | 764.606 | - | 764.606 | 767.210 | 766.092 | 780.181 | 789.744 | Continuing | Continuing |
| • RDTE 06 PE 0605976F: <i>Facility Restoration and Modernization-T&E</i> | 187.216 | 88.445 | 70.985 | - | 70.985 | 70.622 | 71.888 | 73.173 | 74.520 | Continuing | Continuing |

Remarks

E. Acquisition Strategy

N/A