Report Documentation Page

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

<table>
<thead>
<tr>
<th>1. REPORT DATE</th>
<th>05 MAR 2009</th>
<th>2. REPORT TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. DATES COVERED</td>
<td>00-00-2009 to 00-00-2009</td>
<td></td>
</tr>
<tr>
<td>4. TITLE AND SUBTITLE</td>
<td>NetZero Plus (NZ+) Joint Capability Technology Demonstration</td>
<td></td>
</tr>
<tr>
<td>5a. CONTRACT NUMBER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5b. GRANT NUMBER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5c. PROGRAM ELEMENT NUMBER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5d. PROJECT NUMBER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5e. TASK NUMBER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5f. WORK UNIT NUMBER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. AUTHOR(S)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)</td>
<td>Department of Defense, Joint Capability Technology Demonstration (JCTD), Washington, DC, 20301</td>
<td></td>
</tr>
<tr>
<td>8. PERFORMING ORGANIZATION REPORT NUMBER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. SPONSOR/MONITOR'S ACRONYM(S)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. SPONSOR/MONITOR'S REPORT NUMBER(S)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. DISTRIBUTION/AVAILABILITY STATEMENT</td>
<td>Approved for public release; distribution unlimited</td>
<td></td>
</tr>
<tr>
<td>13. SUPPLEMENTARY NOTES</td>
<td>Presented at the NDIA Environment, Energy Security &amp; Sustainability (E2S2) Symposium &amp; Exhibition held 4-7 May 2009 in Denver, CO.</td>
<td></td>
</tr>
<tr>
<td>14. ABSTRACT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. SUBJECT TERMS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. SECURITY CLASSIFICATION OF:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. REPORT</td>
<td>unclassified</td>
<td></td>
</tr>
<tr>
<td>b. ABSTRACT</td>
<td>unclassified</td>
<td></td>
</tr>
<tr>
<td>c. THIS PAGE</td>
<td>unclassified</td>
<td></td>
</tr>
<tr>
<td>17. LIMITATION OF ABSTRACT</td>
<td>Same as Report (SAR)</td>
<td></td>
</tr>
<tr>
<td>18. NUMBER OF PAGES</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>19a. NAME OF RESPONSIBLE PERSON</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18
**Warfighter Problem / Solution**

- **Problem:** Vulnerable lines of communication are subject to attack. Logistics convoys carry all classes of supplies to include fuel for power generation at Forward Operating Bases.

- **Solution:** Leverage GOTS and COTS technologies to reduce fuel requirements at forward operating bases through reduced energy demand, efficient power distribution and increased alternative supply.

---

### JCTD BUDGET

<table>
<thead>
<tr>
<th></th>
<th>FY08</th>
<th>FY09</th>
<th>FY10</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS&amp;C (Cash)</td>
<td>$2.0M</td>
<td>$2.0M</td>
<td>$2.0M</td>
</tr>
<tr>
<td>Army REF / Energy Security TF (Cash)</td>
<td>$0.75M</td>
<td>$0.75M</td>
<td>$0.75M</td>
</tr>
<tr>
<td><strong>TOTAL CASH</strong></td>
<td>$2.75M</td>
<td>$2.75M</td>
<td>$2.75M</td>
</tr>
<tr>
<td>Service In-Kind Contributions</td>
<td>$12.33M</td>
<td>$11M</td>
<td>$6M</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$15.05M</td>
<td>$13.75M</td>
<td>$8.75M</td>
</tr>
</tbody>
</table>

**Total Program Cost:** $37.55M

---

### MANAGEMENT TEAM

- **Lead Service:** Army
- **COCOM Sponsor:** USCENTCOM
- **Technical Manager:** Power Surety TF
- **Operational Manager:** USCENTCOM J8
- **Transition Manager:** PM-MEP
- **Supporting CoComs:** USSOUTHCOM
- **Supporting Services/Agencies:** DLA, USMC
The Problem
By reducing the need for Class III (petroleum)...we can decrease the frequency of logistics, convoys on the road, thereby reducing the danger to our Marines, Soldiers and Sailors.

Request this technology be pursued via other DoD avenues, such as...Joint Concept Technology Demonstration (JCTD).
NetZero Plus JCTD Program Schedule

<table>
<thead>
<tr>
<th>NetZero+ JCTD</th>
<th>FY08</th>
<th>FY09</th>
<th>FY10</th>
<th>FY11</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Documentation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notified as Rolling Start</td>
<td>▲</td>
<td></td>
<td></td>
<td>▲</td>
</tr>
<tr>
<td>JCTD Start</td>
<td>▲</td>
<td></td>
<td>▲</td>
<td>▲</td>
</tr>
<tr>
<td>Implementation Directive</td>
<td>▲</td>
<td>▲</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management and Transition Plan</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
</tr>
<tr>
<td>Assessment Organization Identified</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
</tr>
<tr>
<td>Integrated Assessment Plan (IAP)</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
</tr>
<tr>
<td>Concept of Employment</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
</tr>
<tr>
<td>Training Support Packages</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
</tr>
<tr>
<td><strong>Technology Insertion</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eskimo (Foam Tent)</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
</tr>
<tr>
<td>EPCC</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
</tr>
<tr>
<td>Hybrid Tactical Power (Dome)</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
</tr>
<tr>
<td>Exterior Perimeter Lights</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
</tr>
<tr>
<td>Interior Lights</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
</tr>
<tr>
<td>Larger Dome</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
</tr>
<tr>
<td>Alternative Structures</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
</tr>
<tr>
<td>DREAM</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
</tr>
<tr>
<td>Microgrid/Power Generation</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
</tr>
<tr>
<td>Hybrid Prime Power</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
</tr>
<tr>
<td><strong>Assessments</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology Selection</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
</tr>
<tr>
<td>Data Recording</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
</tr>
<tr>
<td>LUA Demonstration</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
</tr>
<tr>
<td>MUA Demonstration</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
</tr>
<tr>
<td>MUA Memorandum</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
</tr>
<tr>
<td><strong>Transition</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POM Cycle</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1Q</th>
<th>2Q</th>
<th>3Q</th>
<th>4Q</th>
<th>1Q</th>
<th>2Q</th>
<th>3Q</th>
<th>4Q</th>
<th>1Q</th>
<th>2Q</th>
<th>3Q</th>
<th>4Q</th>
<th>1Q</th>
<th>2Q</th>
<th>3Q</th>
<th>4Q</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Documentation</strong></td>
<td>▲</td>
<td></td>
<td></td>
<td></td>
<td>▲</td>
<td></td>
<td></td>
<td></td>
<td>▲</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Technology Insertion</strong></td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Assessments</strong></td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Legend:**
- ▲: Complete
- ▲: Draft
- ▲: Overdue
- ▲: Milestone
- Green: Completed
- Purple: Planned
- Blue: POM Activities
- Orange: BA4 Bridging Funds
Energy Efficient Shelter Evaluation
Overview

• Goals and Objectives:
  – Gather baseline energy usage data in a relevant environment
  – Gather energy usage data for different configurations of energy saving technologies
  – Create a comparative and comprehensive report based on this data

• Expeditionary:
  – Shelters:
  – Shading Systems:
  – Lighting:
  – Insulation:

• Enduring Shelters:
  – Spray foam insulation
  – Dome

• Data collection and analysis
  • Ultimately, reducing generator requirements and fuel
  • Power Usage will be primary metric
Energy Efficient Structures-Expeditionary

Technologies being brought to the table

• New airbeam energy efficient tents
• Power Shades
• Solar Shades
• Honeycomb insulation liner (temper tent)
• Air gel insulation liner (temper tent)
Flexible, Electroluminescent (EL) Lighting Surfaces:
- Provide general illumination for shelters
- Decreases deployment time, weight, and cube
- Polymer-based lighting surfaces are flexible, durable and safe
- Can be printed on multiple substrates (including fabric)
- Puncture of EL lamp does not cause failure
Dome Structure

- 2 Story Dome
- Size - 72’ x 27’
- Energy efficient HVAC units
- Earth Return Ventilation (ERV)
- Energy efficient lighting
- Brigade TOC (footprint)
Energy Efficient Structures - Enduring

Exterior Spray Foam

• Foam insulates temporary tents, containerized living units, office spaces and freezer units to decrease air and dust infiltration.

• Foam is deployed using self-contained, self-powered, Conex-transported spray kits.

• Foam is applied by experts who prepare the structure, apply foam, apply protective coating, and monitor air exchange.
R-Value: A measure of the ability to retard heat flow rather than transmit heat

k-factor: Thermal Conductivity is the measure of a material's ability to transfer heat.

**Tent Configuration**

![Tent Configuration Diagram](image)

- **21.5’**
- **11.15’**
- **150.00’**
- **50.00’**

\[
R = \frac{\text{Thickness of material (in)}}{\text{k-factor (BTU-in/hr-Sqft- F)}}
\]

\[
q = \frac{k \cdot A}{L}
\]

- **Tow** – Wall outside temp
- **Tiw** – Wall inside temp
- **q** – Heat Transfer rate
- **k** – Thermal conductivity
- **A** – Material Total Area
- **L** – Wall Material Thickness

<table>
<thead>
<tr>
<th>Tent Parameters</th>
<th>Un-foamed Tent</th>
<th>Foamed Tent</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tent Surface Area (Roof and Walls)</td>
<td>13,093 Sq Ft</td>
<td>13,093 Sq Ft</td>
<td>Calculated</td>
</tr>
<tr>
<td>Tent Air Volume</td>
<td>122,437.5 Cu ft</td>
<td>122,437.5 Cu ft</td>
<td>Calculated</td>
</tr>
<tr>
<td>Tent Wall and Roof Thickness</td>
<td>.018 Inches</td>
<td>3.00 Inches</td>
<td>Unfoamed tent – Measured; Foamed tent – avg. thickness</td>
</tr>
<tr>
<td>Tent Material R Value</td>
<td>R1</td>
<td>R5.6 – R8 per inch; Avg: R5.6/in = R16.8; R6.8/in = R20.4</td>
<td>Base on Contractor = R13 Base on DOE Data = R16.8</td>
</tr>
<tr>
<td>Tent Material</td>
<td>PVC - Fabric</td>
<td>Polyisocyanurate (Sprayed Foamed)</td>
<td>Manufacturer: Losberger Intertent GmbH</td>
</tr>
<tr>
<td>Estimated Electrical Loads</td>
<td>2.5 kW (1.0 – 1.2, lights; 1.3, mission)</td>
<td>TBD</td>
<td>Tent measured elec. load</td>
</tr>
<tr>
<td>Tent personnel Capacity</td>
<td>150</td>
<td>150</td>
<td>Avg occupancy per rotation is approx. 100 people</td>
</tr>
<tr>
<td>Description</td>
<td>Set Parameters</td>
<td>Un-foamed Tent (LSA) Measured Data ( Winter)</td>
<td>Un-foamed Tent (LSA) Actual Measured Data ( Summer; Jul - XXXX)</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>----------------</td>
<td>---------------------------------------------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>No. Person</td>
<td>150</td>
<td>Approx. 100 people</td>
<td></td>
</tr>
<tr>
<td>Environmental : (°F) Tent Inside</td>
<td>75 - 85</td>
<td>Day – 72.1</td>
<td>Night – 60.5</td>
</tr>
<tr>
<td>Environmental : (°F) Tent Outside</td>
<td>AR 70 – 38 -25°F to 125°F</td>
<td>Day – 56.6</td>
<td>Night – 45.1</td>
</tr>
<tr>
<td>Environmental : (°F) Inside Wall</td>
<td>TBD</td>
<td>Day – 62.2</td>
<td>Night – 43.4</td>
</tr>
<tr>
<td>Environmental : (°F) Outside Wall</td>
<td>TBD</td>
<td>Day – 63.6</td>
<td>Night - 41.9</td>
</tr>
<tr>
<td>Lights</td>
<td>TBD</td>
<td>1.0 – 1.2 kW</td>
<td></td>
</tr>
<tr>
<td>Electrical Loads</td>
<td>TBD</td>
<td>1.3 kW</td>
<td></td>
</tr>
<tr>
<td>Mission</td>
<td>TBD</td>
<td>PVC Fabric</td>
<td></td>
</tr>
<tr>
<td>Tent Material</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tent R Value</td>
<td>TBD</td>
<td>.018 inch thk (single Layer, no insulation) = R1</td>
<td>.018 inch thk (single Layer, no insulation) = R1</td>
</tr>
<tr>
<td>ECU kW (Max)</td>
<td>TBD</td>
<td>106. 614 kW (Heat)</td>
<td></td>
</tr>
<tr>
<td>Total kW Load</td>
<td>XXXX.XX kW</td>
<td>108.799 kW ( Heat + Tent Electrical Load)</td>
<td></td>
</tr>
<tr>
<td>Total Cooling/Heating Load (incl solar)</td>
<td>Based on computer Simulation</td>
<td>Based on computer Simulation</td>
<td></td>
</tr>
</tbody>
</table>
Using the following scales, please rate your experience with foamed tents by circling the appropriate number for each item.

[Effectiveness item #1]
1. How effective did you find the foaming of the tent to be?
   1 2 3 4 5 6 7
   Not at all effective
   Very effective

[Effectiveness item #2]
2. On average, how comfortable was the temperature inside the foamed tent?
   1 2 3 4 5 6 7
   Not at all comfortable
   Very comfortable

[Sustainability item #1]
3. Please rate the availability of materials for repairing the foamed tent:
   1 2 3 4 5 6 7
   Not at all available
   Very available

[Sustainability item #2]
4. Please rate the availability of personnel for maintenance of the foamed tent:
   1 2 3 4 5 6 7
   Not at all available
   Very available

[Compatibility/Interoperability item]
5. Please rate the compatibility of the foam with other components of the tent structure:
   1 2 3 4 5 6 7
   Not at all compatible
   Very compatible

[Impact on operations item]
6. Please rate the impact of the foamed tent on day-to-day operations and mission requirements:
   1 2 3 4 5 6 7
   Very negative impact
   Neutral impact
   Very positive impact

[Effectiveness item #3]
7. Overall, how satisfied were you with the foaming of the tent?
   1 2 3 4 5 6 7
   Not at all satisfied
   Very satisfied
Expeditionary Power Assessment
ECU and Mission Load

Equipment List: Power and related Wiring

- Power Distribution Panel – Custom (CEP)
- ECU Power Cables – Qty 3; 100’; Custom; P/S - CLF
- ECU Power Cables – Qty 2; 50’; Custom; P/S – CLF
- Gen Set to PDP Cables – Qty 4; 25’; Custom; CL
- PDS Cables – Qty 5; 100’; 6400M

Note:
Total Cost for PDP and Cabling - $11,626.25
Manufacture of PDP and Cables
CEP Manufacturing

Temp Data Logger – Monitor Int. & Ext. Tent Wall Temperatures
- 2 places

AC Data Logger – Monitor ECU Load (1 - Data Logger)

AC Data Logger – Monitor Mission Loads and Lightings
(2 – Data Loggers)
Dome Renewable power system equipment we are monitoring:

- **Renewable Sources at COB King**
  - 2 solar charge modules
  - 2 wind turbines
  - 1 generator
  - 4 inverters
  - 1 battery bank
Enduring Power Assessment - Foam
ECU and Mission Load

**TENT 1**
- 70 kW Gen Set
- ECU 60T
- 30T

**TENT 2**
- 70 kW Gen Set
- ECU 60T

**TENT 3**
- 400 kW Gen Set
- ECU 60T

**TENT 4**
- 70 kW Gen Set
- ECU 60T

**TENT 5**
- 800 kW Gen Set
- ECU 60T

**MESS HALL Tent**
- 70 kW Gen Set
- ECU 60T
- 400 kW Gen Set
- X-Former Unit 120/208 Vac, 3Ø

**MAIN TENTS**
- Data Logger Qty
  - Lights: 5
  - Mission Load: 5
  - ECU 60T: 4
  - ECU 30T: 2
  - Gen Set 800 kW: 1
  - Gen Set 400 kW: 1
  - Gen Set 70 kW: 2

**FOAM TENTS**
- Data Logger Qty
  - Lights: 1
  - Mission Load: 1
  - Gen Set 70 kW: 1
  - Gen Set/ECU 30T: 1

**TOTAL**
28+2 Spare = 30
Enduring Power Assessment - Foam vs Unfoamed ECU and Mission Load

Note: ECUs and CB BOXES are located on permanent concrete pads. Currently ECUs and PDS configuration are not defined.

Breadcrumb Diagram:

LSA WARRIOR – UNFOAMED TENT

AC Data Logger – Monitor ECU Load (1 Data Logger)
Temp Data Logger – Monitor Int. & Ext. Tent Wall Temp
- 2 places
AC Data Logger – Monitor Mission Loads and Lightings (2 Data Loggers)
- PDS Power Connected to Ext. Gen Set

FOB KING/Miami – FOAMED TENT

AC Data Logger – Monitor ECU Load (1 Data Logger)
Temp Data Logger – Monitor Int. & Ext. Tent Wall Temp
- 2 places
AC Data Logger – Monitor Mission Loads and Lightings (2 Data Loggers)
- PDS Power connected to CB BOX
Foamed and Non Foamed Tent Cooling load Comparison

T2 – T1 = Delta T

Foamed Tent

- Tent Internal Temp
  - TC3
- Temp D/L
- TC1
- TC2
- TC4
- Outside Ambient Temp
- ECU
- Power D/L
- Power In

Non-Foamed Tent

- Tent Internal Temp
  - TC1
  - TC2
- Temp D/L
- TC4
- Outside Ambient Temp
- ECU
- Power D/L
- Power In

Set Parameters
- 75 - 80 F Int Temp
- 120 - 125 F Amb Temp

Elec. Load

T2 – T1 = Delta T
Baseline Testing Equipment –
ECU and Mission Loads

Data Logger location
Outside Tent

Ambient Temp Thermocouple

Outside

Tent Wall Thermocouples

Outside Wall

Inside

Inside Wall
Baseline Testing Equipment – ECU and Mission Loads

Power Adaptor Box to ECU (20T Unit)  Power Adaptor Box to HTR Pwr. Dist.  Tent Power Dist. Box

ECU Power Adaptor Box  Heater Power Dist. Box  Auxiliary Heater (2 per Tent)
1456.45 kWh produced throughout month with percentage of what source provided the power
Energy Efficient Structures – Enduring Preliminary Analysis

- Raw data from July 1, 2008 through July 31, 2008
- Data in different supply sources including, wind, solar, and generator
- Characteristics of power available versus time of day
- Energy (kWh) produced from each source throughout the month
- Energy ‘lost’ by the system because the batteries are full and no demand for the power produced
- Battery voltage versus load & available power
- Load on the inverters versus the system response
Energy Efficient Structures – Enduring Preliminary Analysis

Foamed Tent No. 1 - Inside and Outside Wall Temperature

Temperature, °F

Tent Inside Wall Temp.

Tent Outside Wall Temp.

Difference of Two Temperatures (DeltaT)

Average Difference of Two Temperatures: 1.876 °F
Tent No. 1 - Inside and Outside Ambient Temperature

Inside Amb. Temp.
(43.1°F)

Outside Amb. Temp.
(58.7°F)

ECU Power Draw
(93.36 kW)

Inside Amb. Temp.
(40.2°F)

Outside Amb. Temp.
(38.0°F)
Points of Contact

• **Oversight Executive**
  – Gregory R. Reid, 703.601.2123, [Greg.Reid@osd.mil](mailto:Greg.Reid@osd.mil)

• **Technical Manager**
  – Ms. Barbara Brygider, 703.615.6774, [bbrygider@comcast.net](mailto:bbrygider@comcast.net)

• **Operational Manager:**
  – Mr. Thomas Smith, 813.827.3287, [smithtr@centcom.mil](mailto:smithtr@centcom.mil)

• **Transition Manager**
  – Mr. Chris Bolton, 703.704.1995, [chris.bolton@us.army.mil](mailto:chris.bolton@us.army.mil)

• **Data Acquisition/Analysis**
  – Mr. Noel Pleta, 703.704.2148, [noel.pleta@us.army.mil](mailto:noel.pleta@us.army.mil)