B61-12: The New Guided Standoff Nuclear Bomb

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Perspectives From the United States and Europe

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B61-12: The Concept

- Consolidate four existing B61 versions (B61-3, -4, -7, 10) into one type
- The B61-11 will also be retired, a hint that B61-12 might have some capability against underground targets
- Retain nuclear bombs for U.S. strategic bombers in the United States, U.S. fighter-bombers deployed in Europe, and NATO fighter-bombers
- Add new safety and security features (although only modest improvement on B61-12)
- Use smallest B61 warhead (B61-4 with 0.3-50 kilotons) to reduce HEU available to theft
- Reduce total stockpile (gravity bomb inventory would decline by 53 percent)
- Save money
B61 Types and Numbers

- Nearly 3,000 built since 1963; an estimated 825 remain today
- 15 different versions of original design
- 6 initial original versions were later modified into 9 retrofits with different and improved military capabilities
- 2 retrofits were reentry vehicles
- 1 current version is nuclear earth-penetrator
- Yields range from 0.3 to 400 kilotons
- Of 825 remaining B61s, roughly 370 are active
- 645 stored in continental United States; 180 in Europe
- B61s are some of the safest warheads in the stockpile

### Estimated B61 Bomb Inventory and Capabilities, 2014

<table>
<thead>
<tr>
<th>Type</th>
<th>Mission</th>
<th>Yields</th>
<th>Status</th>
<th>Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>B61-3</td>
<td>Tactical bomb</td>
<td>0.3, 1.5, 60, 170</td>
<td>Active/Inactive</td>
<td>200</td>
</tr>
<tr>
<td>B61-4</td>
<td>Tactical bomb</td>
<td>0.3, 1.5, 10, 50</td>
<td>Active/Inactive</td>
<td>200</td>
</tr>
<tr>
<td>B61-7</td>
<td>Strategic bomb</td>
<td>10-360</td>
<td>Active/Inactive</td>
<td>290</td>
</tr>
<tr>
<td>B61-10</td>
<td>Tactical bomb</td>
<td>0.3, 5, 10, 80</td>
<td>Inactive</td>
<td>100</td>
</tr>
<tr>
<td>B61-11</td>
<td>Volkel</td>
<td>400</td>
<td>Active/Inactive</td>
<td>35</td>
</tr>
<tr>
<td>(B61-12)</td>
<td>Strategic and tactical bomb</td>
<td>0.3, 1.5, 10, 50</td>
<td>Planned</td>
<td>(480)</td>
</tr>
</tbody>
</table>

**Total** 825
• B61 bombs estimated at 10 locations in Europe and United States:
  - 6 bases in 5 NATO countries
  - 4 bases in United States
• 8 other facilities have no B61s present but nuclear-capable aircraft or storage vaults in caretaker status

**Strategic Bomber Bases**
- Minot AFB (ND): B-52H and B61-7
- Whiteman AFB (MO): B-2A and B61-7/B61-11
- Barksdale AFB (LA): B-52H

**Tactical Fighter Bases**
- Volkel AB: B61s for Dutch F-16s
- Kleine Brogel AB: B61s for Belgian F-16s
- Buchel AB: B61s for German Tornados
- Ghedi Torre AB: B61s for Italian Tornados
- Aviano AB: B61s for US F-16s
- Incirlik AB: B61s for US and Turkish F-16s (no aircraft on base)
- Lakenheath AB: US F-15Es (no bombs on base)
- Seymour-Johnson AFB: F-15Es (no bombs on base)
B61s in Europe

- 180 B61 bombs in Europe
- Cold War deployment (all types of weapons) peaked at 7,300 in 1971
- Post-Cold War deployment reduced by more than half since 2004 – unilaterally

**US Nuclear Weapons In Europe 2014**

<table>
<thead>
<tr>
<th>Country</th>
<th>Base</th>
<th>Vaults</th>
<th>B61s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>Kleine Brogel</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td>Germany</td>
<td>Buchel</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td>Italy</td>
<td>Aviano</td>
<td>18</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Ghedi Torre</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Volkel</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td>Turkey</td>
<td>Incirlik</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>87</td>
<td>180</td>
</tr>
</tbody>
</table>

- Current B61 deployment at six bases in five countries
- 4 national bases for delivery by national aircraft; 2 US bases for delivery by US aircraft
- 87 underground storage vaults (348 capacity); additional vaults at other bases in caretaker status
- Despite reduced readiness compared with Cold War, weapons are stored near delivery aircraft
- Additional weapons stored in the United States
**B61-12: Claims**

**Official Explanation:**
- Not a new nuclear bomb but simply a life-extension of an existing version
- No new military capabilities
- Will result in cost savings
- Will result in reduction of stockpile
- Needed to improve nuclear surety
- Full LEP urgently needed

**But in Reality:**
- It is a new “new” nuclear bomb type that is not currently in the nuclear stockpile
- It has improved military capabilities
- It is the most expensive nuclear bomb project ever; many costs are still unknown
- Yes it will reduce stockpile some, but those reductions could be made anyway
- It is already one of the most secure warheads in the stockpile
- A simpler LEP can fix urgent aging issues at a lower cost: extend B61-7 and B61-4
B61-12: Increased Accuracy

- Tail kit will increase accuracy, provide a modest standoff capability
- Accuracy secret but estimated to be around 30 meters CEP
- Existing bombs have CEP of 110-170 meters (360-557 feet)
- Reduction in radioactive fallout can be significant (see below)
B61-12: Improved Military Capabilities

- B61-12 will be more accurate and capable than the B61s currently deployed in Europe
- First guided standoff nuclear bomb
- New guided tail kit “will provide a modest standoff capability, for safe aircraft escape, and sufficient delivery accuracy so that the lower yield of the B61-12 can achieve the same military effect as the original B61.”
- Lower yield options can be used against targets that today require higher yield
- Lower yield means less radioactive fallout and more “useable” weapon

**Question:** Will improved accuracy and lower yield affect the way the military thinks about the use of the B61 bomb?

**Answer:** Without a doubt. Improved accuracy and lower yield is a desired military capability.

**Question:** Will that result in a different target set or just make the existing weapon better?

**Answer:** It would have both effects.

*General Norton Schwartz, USAF (Ret.), 16 Jan. 2014*
B61-12: Integration

- Integration on six different platforms: B-2A, B-52H (?), F-15E, F-16, F-35A, Tornado
- From late-2020s, also integration on the next-generation bomber (LRS-B)
- F-35A will replace F-16 and Tornado in NATO nuclear mission
- Initially, B61-12 tail kit will be “locked” on NATO F-16 and Tornado
- Increased military capability will become available with transition to F-35

Why does NATO and the United States need to deliver a nuclear bomb from so many platforms?
B61-12: Cost

- NNSA B61 LEP cost estimate doubled between 2010 and 2012 from $4 billion to $8 billion
- DOD CAPE study in 2012 projected $10.4 billion
- Guided tail kit assembly estimated at $1.4 billion
- Plan for nearly 500 B61-12s makes this the most expensive bomb project ever: each bomb will cost more than its own weight in solid gold
- Add to that the cost of integrating the B61-12 on bombers and fighter-bombers; $350 million for F-35 alone
- European deployment: $100 million per year

Is this the best way for NATO and the United States to spend their defense money?
Conclusions

• B61-12 program will add new military capabilities to the B61 bomb by equipping it with a guided tail kit to increase the accuracy of the bomb

• Increased accuracy will allow selection of lower yields against targets that currently require higher yields, thus reducing radioactive fallout from a strike

• Improved military capabilities contradict Nuclear Posture Review promise not to add military capabilities during LEPs and DDPR conclusion that current posture already meets NATO needs

• Improved capabilities of B61-12 bomb and F-35 stealth fighter undercuts efforts to make Russia reduce its non-strategic nuclear weapons; signals that it is acceptable for Russia to modernize its non-strategic nuclear weapons as well

• Conditioning further NATO reductions on Russian reciprocity surrenders initiative to hardliners in the Kremlin; Russian non-strategic nuclear posture not determined by NATO’s non-strategic nuclear posture but by Russia’s inferior conventional forces

• European B61 deployment is fake reassurance: least likely to ever be used for Allies’ security needs; stealing scarce resources from real-world non-nuclear capabilities

• Phase-out of deployment would realign NATO’s nuclear posture with nuclear arms control policy