Potential Threat of CBRNE Terrorism in Japan

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Threat of CBRNE terrorism(1): UAV/drone with C

Threat - Old but not too old: Matsumoto Sarin case
Chem-Images of Downwind hazard area

Imaginary C-threat (2kg of Sarin)
Drone-type Pesticide Sprayer: ZXXX
(Matsumoto castle, 20m alt., SSW 1m/s)

Sim by ALOHA
Down wind hazard: 1.1~2.6km

AEGL3 x10~15

Fact
Down wind hazard: 100~150m
● Threat of CBRNE terrorism(2) : UAV/ drone with R

Date: 2015/9th April
R source: contaminated dart 100g (134Cs, 137Cs, 1.5μSv/hr)
Drone: commercial drone- CJI Phantom

Image of a R-drone
(cf.: PM’s official residence)
Threat of CBRNE terrorism (3) Stand-off attack by Small Weapon
### Threat of CBRNE terrorism(3) Stand-off attack by Small Weapon

<table>
<thead>
<tr>
<th>Weapon</th>
<th>Country</th>
<th>Weight</th>
<th>Range</th>
<th>Warhead Ø/Kg</th>
<th>Armor Penetration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milan Anti-Tank Missile</td>
<td>France</td>
<td>32 kg</td>
<td>2000 m</td>
<td>133 mm/3.12 kg</td>
<td>&gt;1000 mm</td>
</tr>
<tr>
<td>Panzerfaust 3 Anti-Tank Launcher</td>
<td>Germany</td>
<td>13 kg</td>
<td>300 m</td>
<td>110 mm/NA</td>
<td>&gt;700 mm</td>
</tr>
<tr>
<td>RPG-7 Anti-Tank Launcher</td>
<td>Soviet Union</td>
<td>11 kg</td>
<td>300 m</td>
<td>85 mm/NA</td>
<td>330 mm</td>
</tr>
<tr>
<td>Carl Gustav M2 Recoilless Gun</td>
<td>Sweden</td>
<td>15 kg</td>
<td>700 m</td>
<td>84 mm/NA</td>
<td>&gt;400 mm</td>
</tr>
<tr>
<td>LAW 80 Anti-tank Launcher</td>
<td>U.K.</td>
<td>9 kg</td>
<td>500 m</td>
<td>94 mm/NA</td>
<td>700 mm</td>
</tr>
<tr>
<td>TOW 2 Anti-tank Missile</td>
<td>USA</td>
<td>116 kg</td>
<td>3750 m</td>
<td>127 mm/28 kg</td>
<td>&gt;700 mm</td>
</tr>
<tr>
<td>Javelin AAWS/M</td>
<td>USA</td>
<td>16 kg</td>
<td>2000 m</td>
<td>127 mm/NA</td>
<td>&gt;400 mm</td>
</tr>
</tbody>
</table>

**Dray Cask for spent fuel**

- Wall Thickness: ~??cm (steel: ~??cm)

**Dray Cask for Cs absorption pod**

- ca.10^{14}〜10^{15}Bq/pod
- stocks: ca.500 casks (at April 2013)