

# Electromagnetic Pulse (EMP) Protection in South Carolina

By

**Ambassador Henry F. Cooper**  
**Chairman, High Frontier**

*See [www.highfrontier.org](http://www.highfrontier.org) for more information.*

*January 20, 2014*

*Briefing at the*

*South Carolina Tea Party Coalitions Convention*  
*Myrtle Beach, SC*

# Electromagnetic Pulse (EMP) Protection In South Carolina

## Presentation Outline

- **Nature of the Threat**
  - *Manmade*
  - *Natural*
- **What can be done about it**
  - *Missile Defense*
  - *Harden the Electric power Grid*
- **How South Carolina can play a significant role**
  - *Especially in supporting the National Guard*
  - *What you can do to help*



**Get involved today—inform yourself and act! For more information on the threat and how to get involved to protect your family and friends, see [www.highfrontier.org](http://www.highfrontier.org) and its links to others who are already engaged in this important fight.**

## The EMP Threat well understood from Cold War tests: 1962 Starfish Prime High Altitude Test

- A “wake-up call”
- 1.5 megaton explosion, 240 miles above Johnston Island in the South Pacific
- Damaged test instrumentation
- Killed three satellites immediately, and 7 more died in the next few months
- Electrical damage 900 miles away in Hawaii
- Today’s electronics would have experienced much more catastrophic damage
- Weapon designs can be more lethal, too—and at much lower yields



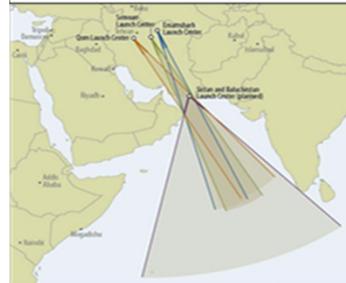
*Led to a major effort to harden our strategic systems—but we did little or nothing to harden our civil critical infrastructure*

## Most Concerned if Iran mates Nuclear Weapons to any of its many Ballistic Missiles

- Iranian authorities—the Mullahs—say they intend to destroy the US (the “Great Satan”) and Israel (the “Little Satan”) and kill as many of us as possible
  - This is a theological goal for all Jihadists, suggesting scenarios involving collaboration with terrorists
- Our missile defense efforts have focused on threats from North Korea and Iran over the North Pole
  - Ground-based sites in Alaska and California
  - **Pentagon/Congress considering an East Coast Missile defense site to improve defense against Iranian ICBMs**
- Need defense against two even more troublesome EMP attack scenarios—from Iran (or North Korea):
  - **Short or medium range missiles from vessels off our coasts (especially from the Gulf of Mexico) to detonate warheads 200-300 miles over the U.S.—EMP would kill no one immediately, but within a year several hundred million Americans could die from starvation & chaos**
  - **A nuclear armed satellite over the South Pole to be detonated over the US at 200-300 miles altitude**
  - Iran has practiced both scenarios



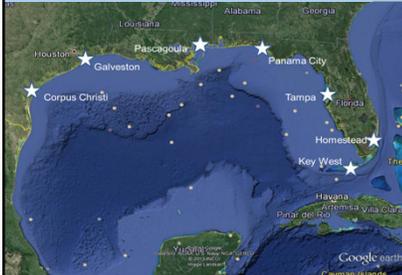
Ballistic Missile on Container Ship Ready to Launch



Iran has launched satellites into orbit to the South, over the South Pole

*Americans need to wake up to this well known (even to terrorists) threat & demand that their Representatives provide for the common defense!*

## Important Quick Fix to Threats from the South: Aegis Ashore Sites Around the Gulf of Mexico



- *Aegis Ashore site in Hawaii is operational for testing purposes*
- *Have begun construction of Romanian Site*
  - *Operational by 2015 with a second site in Poland by 2018*
- *Site spacing around Gulf coasts depends on interceptor speeds*
  - *Have met with folks in Mississippi and Florida*
    - *Pascagoula, Miss. where Aegis ships are built*
    - *Panama City/Tyndall AFB, FL home of 1<sup>st</sup> AFNORTH*
      - *[Command Links to 263<sup>rd</sup> AAMDC in Anderson, SC](#)*
- *Plan to go to Texas perhaps this year—Corpus Christi?*



***Aegis Ashore employs Aegis BMD shipboard components as “football size” ground-based interceptor system—no additional R&D cost***

## The South Carolina National Guard has an Important National Role—including the 263<sup>rd</sup> Army Air and Missile Defense Command (AAMDC), which:

- *Is located in Anderson, SC, manned and led by SC National Guard personnel—and is a direct report to SC Adjutant General, under the Governor of SC*
- *Is already linked to critically important elements of our Homeland Defense*
  - *As ordered by the Governor, provides Defense Support to Civilian Authorities (DSCA), including for security operations in support of disaster relief, crowd control, or other duties as assigned by the Governor.*
  - *Under a USAF Lt. General at Tyndall AFB, Panama City, FL who is Commander of First Air Force, (AFNorth) and the Air Component Commander of the Continental NORAD Region (CONR)—and who has sole responsibility for ensuring the air sovereignty and air defense of the continental United States, U.S. Virgin Islands and Puerto Rico, as a direct report to the Commander of Northern Command in Colorado Springs*
    - *The Commander of the 263<sup>rd</sup> AAMDC is the Deputy Area Air Defense Commander for Continental NORAD Region (CONR)*
  - *Under an USA Lt. General who is Commander of Fifth Army (Army North) at Ft. Sam Houston, Texas who is charged with protecting the American people and their way of life, a direct report of Northern Command in Colorado Springs*
  - *Under Northern Command plans and operations, conducts Joint and Combined Theater Air and Missile Defense in support of designated operations plans and contingency operations.*
- *Role to be determined with respect to Aegis Ashore deployments to counter theater range ballistic missiles or other threats from the South*

***I hope to help the SC Adjutant General’s office support National Guard “tabletop” exercises that include EMP and lead to a Vigilant Guard exercise in 2015 that would involve neighboring and other states.***

## Such an Exercise Could Demonstrate How the Electric Power Grid is an Achilles Heel

- *The electric power grid, with its transformers and generators, electronic controls and thousands of miles of power lines, is a vast electronic machine*
  - *Keystone supporting modern civilization—it powers all other critical infrastructure*
  - *Also more vulnerable to EMP than any other critical infrastructure*
    - *If it collapses, so will all other critical infrastructure*
    - *If it can be protected, all other critical infrastructure can be restored*
- *EHF Transformers are a critical weak link*
  - *They drive electric current over long distances*
  - *Manufactured in Germany and South Korea; not in US*
  - *Each is custom made for its unique role in the grid*
  - *Requires 18 months to manufacture—and must be shipped to US*
  - *A loss of large numbers would mean a protracted blackout—lasting years*
- *Supervisory Control And Data Acquisition systems (SCADAs) are also critical*
  - *Millions of small computers, ubiquitous in critical infrastructure regulating flow of electricity, controlling gas pipelines, operating traffic lights, etc.*
  - *They are more easily replaced if damaged by EMP*

*Hardening the electric grid deserves top priority, as recommended by the congressionally mandated EMP Commission in 2004 and 2008, and validated by four other major reviews. Two congresses have failed to pass legislation enabling the needed initiatives—and advocates are trying again in the new Congress.*

## Summary Plans and How You Can Help

- ***My Objective:*** *To work with the SC Adjutant General and the 263<sup>rd</sup> AAMDC toward consciousness raising via National Guard exercises*
  - *Conducted to involve citizens and local, state and federal authorities—from the bottom-up*
  - *Including other organizations with potentially important supporting roles—e.g., the Savannah River National Laboratories*
  - *With appropriate links to neighboring states and the national command authorities*
  - *Possibly with a missile defense role—e.g., on Tyndall AFB to help counter a ballistic missile threat from the Gulf of Mexico or Venezuela or some other attack from the south*
  - *Beginning with tabletop exercises leading to a National Guard Vigilant Guard exercise—hopefully in 2015*
- ***Status:*** *Ongoing discussions with key potential players*
  - *Key staff of the SC Adjutant General and the commander of the 263<sup>rd</sup> AAMDC*
  - *Key staff at the Savannah River National Laboratories*
  - *SC state legislators and representatives in the U.S. Congress*
  - *Florida state representatives about Aegis Ashore sites at Tyndall and Homestead AFBs*
  - *A former Adjutant General of Virginia, who will help us link our plans and activities with operations in Virginia and the National Capitol Area*
- ***Related Activities:*** *To gain support from the powers that be to:*
  - *Assure deployment of an effective East Coast Missile Defense*
  - *Deploy Aegis Ashore BMD sites around the Gulf of Mexico*
  - *Harden the electric power grid*
  - *Encourage grass roots efforts to press the “powers that be to provide for the common defense”*

*Get involved today—inform yourself and act! For more information on the threat and how to get involved to protect your family and friends, see [www.highfrontier.org](http://www.highfrontier.org) and its links to others who are already engaged in this important fight.*