

# GOOD HARBOR

CONSULTING, LLC

## **AES SPARROWS POINT: A RISK ASSESSMENT**

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The AES Corporation retained Good Harbor Consulting, LLC, to conduct a risk assessment of the proposed Sparrows Point liquefied natural gas (LNG) terminal using the same methodology employed in our reviews of other LNG projects. The conclusions articulated in this memorandum are taken from the full assessment, which will be released in the coming weeks.

### ***Methodology***

Good Harbor's risk management assessment methodology focuses on the potential security risk by examining **THREAT**, **VULNERABILITY** and **CONSEQUENCE**.

**THREAT** is defined as a function of intent and capability. "Intent" is defined as the extent to which terrorist groups have expressed interest in attacking a particular type of target or whether their strategic objectives would be served by such attacks, and "capability" is defined as the extent to which terrorist groups have or could easily obtain the means necessary to conduct a significant attack against a class of facilities.

**VULNERABILITY** is defined as the extent to which a class of infrastructure has inherent weaknesses to certain vectors of attack, with and without mitigation efforts, which can be exploited to generate consequences.

**CONSEQUENCE** is defined as the range of damage from an attack on a certain class of infrastructure and to what extent surrounding communities have the capability to respond adequately to such circumstances; what the costs would be of creating missing capabilities, and on whom the financial burden would be placed.

Good Harbor's analysis utilized the safety guidelines for LNG tankers articulated in the Sandia National Laboratories' 2004 report, "Guidance on Risk Analysis and Safety Implications of a Large Liquefied Natural Gas (LNG) Spill Over Water."

### ***Key Judgments***

Employing this methodology, Good Harbor concludes that Sparrows Point represents an unlikely terrorist target. A successful attack on an LNG vessel in transit to or berthed at the facility would be difficult and would yield few fatalities, minimal damage to other key facilities, and limited socio-economic disruption. The proposed facility would be located in an industrial zone, away from commercial or residential areas. The location provides an inherently safer alternative than proposals in major population centers. There are more attractive targets which would be much easier to attack and which would, unlike Sparrows Point, produce mass casualties and significant disruption.

In the definitive government study on the risks of LNG spills over water, the Sandia National Laboratory team divided the areas through which LNG tankers transit into three numbered zones. For intentional spills, Zone 1 facilities are in areas within 500 meters of major infrastructure,

population, and commercial centers. Zone 2 facilities are in areas with major infrastructure, population, and commercial centers between 500 meters and 1600 meters. Zone 3 facilities are in areas greater than 1600 meters from major infrastructure, population, and commercial centers. The proposed Sparrows Point terminal would be a Zone 3 facility, the lowest risk level. In comparison to the existing terminal in Everett, Massachusetts, which Good Harbor has previously advocated be closed, the Sparrows Point proposal is inherently safer. Its location in an industrial area is far different than the mixed-use commercial and residential area within the hazard zones of the Everett facility. This also holds true in comparison to the 2004 proposal for an LNG facility in Providence, Rhode Island, that was denied FERC permitting largely on the basis of an analysis conducted by Good Harbor.

### ***Net Assessment***

In short, security concerns should not be a bar to approval of the project. Because the vulnerabilities of an LNG tanker bound for or berthed at the proposed Sparrows Point terminal are difficult to exploit and possible to protect, and because the consequences of an attack on a vessel are relatively low, we judge it unlikely that terrorists would find the terminal to be an attractive target. The planning required, the training necessary, and the weapons capability needed suggest that an LNG tanker is only an attractive target if the consequences in terms of human loss and property damage are high. Though terrorist groups possess the necessary capabilities to attack an LNG carrier, the proposed location of the Sparrows Point facility in an industrial area prevents a successful attack from fulfilling their intent to kill large numbers of Americans and destroy iconic structures. They would therefore likely not attempt such an attack and apply their capabilities to more spectacular and lethal targets.

### ***Recommended Security Measures***

There are serious risks attendant with any flammable product, and these extend to the AES' proposal to bring LNG to Sparrows Point. These risks can be effectively managed for the proposed project. Facilities such as LNG terminals should be constructed with security as an embedded feature, not imposed post-construction as an afterthought. AES should consider security of the facility as their responsibility, not just that of the U.S. Coast Guard, the Department of Homeland Security or local law enforcement. While the decision to pursue the project in a remote location represents a significant investment in security, additional measures that should be taken include, but are not limited to: construction of a security barrier around the berth; posting armed security personnel at all times; installing LNG release detection systems; equipping Turner Station with a loudspeaker system and preparing emergency procedures; installing swimmer detection systems; and deploying smart CCTV cameras around the berth.

### ***About Good Harbor***

Good Harbor Consulting, LLC provides security consulting services for a broad range of clients—including Fortune 500 companies, industry associations, systems integrators, and innovative technology start-ups—in the fast-developing areas of homeland security, cyber security, critical infrastructure protection and counterterrorism.