



TO: National Security Council

FROM: Ghost in the Shellcode [W. DeSombre, M. Lee, E. Plankey, B. Saunders]

RE: Policy Options – Downstream Effects from Cyber Attack on Qatari Water Treatment Facility

EXECUTIVE SUMMARY: A cyber attack on a Qatari water treatment plant through compromising Yuma software led to minor disruptions and mass panic during the 2022 World Cup in Doha. This compromise may **impact U.S. industrial control systems**. A Chinese firm attributed the attack to the United States without sharing evidence. This **increased U.S. diplomatic tensions with France and Qatar**.

PRIMARY ASSESSMENTS:

Short-term Diplomatic Tensions

[Severity: **High** | Likelihood: **High**]

- **We do not have U.S. intelligence confirming Chinese analysis.** Tensions with France and Qatar can increase risks to the Qatar USCENCOM air base / U.S.-French counter cybercrime partnership.

Long-term ICS Cyber Defense

[Severity: **Medium** | Likelihood: **Medium**]

- **We do not know how many U.S.-based desalination / water treatment plants use Yuma software.** If U.S. infrastructure is compromised, mass panic will likely also play a role.

RECOMMENDATION: COA2 – Aid and Attribution Diplomacy

COA2 provides solutions for domestic resiliency, concrete steps to engage France and Qatar, and mitigates diplomatic spillover of allegations against the U.S.

POLICY OPTIONS

COA1 - BASELINE <i>Full Transparency</i>	COA2 - RECOMMENDED <i>Aid & Attribution Diplomacy</i>	COA3 - AGGRESSIVE <i>Prepare Defenses</i>
<ul style="list-style-type: none"> • CISA, USCERT, and WaterISAC identify U.S. vulnerabilities. • FBI/NCIJTF publicly offer to support Qatar. • State issues advisory on the World Cup. • State issues a statement on protecting world cultural events. 	<p>COA1 and:</p> <ul style="list-style-type: none"> • State & FBI jointly state that USG is using all available sources to investigate. • USIC conducts private attribution of actors. • FBI reaches out to OCLCTIC to assist investigation, engages U.S. private sector partners. • USAID offers to ship bottled water stockpiles to regions not connected to Qatari reserves. 	<p>COA2 and:</p> <ul style="list-style-type: none"> • Public denouncement of U.S. attribution by U.S. Press Secretary. • DOD notifies Al Udeid Air Base to be on alert for retaliatory, anti-U.S. protests. • DOD offers to send an aircraft carrier to purify water in the Persian Gulf.
<p>✓ Shows U.S. support on finding true perpetrators, proactively protects U.S.</p> <p>✗ Does not address U.S. attribution, limited engagement with private sector.</p>	<p>✓ Smooths tensions with France and Qatar.</p> <p>✗ Increases potential tensions with the Chinese government.</p>	<p>✓ Ensures safety of USPERs in Qatar, preempts criticism of insufficient response.</p> <p>✗ Risks perception of acting disproportionately and antagonizes China, Qatar, and Iran.</p>