Institute for Science and International Security

ISIS REPORT

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Syria Update III: New information about Al Kibar reactor site

David Albright and Paul Brannan

Today, the United States is releasing new information which provides dramatic confirmation that the Syrian site attacked by Israel on September 6, 2007 was a nuclear reactor. The information, including images taken inside the reactor building before it was attacked, also indicates that North Korea helped to build the reactor, which resembles closely the one at the Yongbyon nuclear center in North Korea. ISIS first identified the site in a series of reports beginning October 24, 2007 and continuing on the 25th and 26th., which showed the razing of the site following Israel's attack. Commercial satellite imagery of the site is available in these reports and subsequent ones.

Implications for Syria and the Six Party Process

The release of this information is likely to prompt a fresh wave of questions about North Korea's commitment to verifiably dismantle its nuclear arsenal and halt its proliferation activities. This new information confirms the need to be concerned about Syrian and North Korean actions, including their nuclear cooperation which dates back many years. However, it should not be seen as a *casus belli* against Syria or a reason to scuttle the progress being made at the Six Party Talks in disabling and dismantling North Korea's nuclear arsenal.

First, the United States does not have any indication of how Syria would fuel this reactor, and no information that North Korea had already, or intended to provide the reactor's fuel. This type of reactor requires a large supply of uranium fuel. The lack of any identified source of this fuel raises questions about when the reactor could have operated, despite evidence that it was nearing completion at the time of the attack.

Second, the United States and Israel have not identified any Syrian plutonium separation or nuclear weaponization facilities. The absence of such facilities gives little confidence that the reactor was part of an active nuclear weapons program. The apparent absence of fuel, whether imported or indigenously produced, also lowers confidence that Syria has an active nuclear weapons program.

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236 Massachusetts Avenue, NE, Suite 500 Washington, DC 20002
TEL 202.547.3633 • FAX 202.547.3634
E-MAIL isis@isis-online.org • www.isis-online.org

Third, U.S. negotiations with North Korea in the Six Party process have made significant progress. The disablement of key nuclear facilities at the Yongbyon complex is far along. Work on obtaining a declaration of all North Korean nuclear activities is yielding new information about North Korea's plutonium-based program, the one at the heart of its entire nuclear arsenal. And North Korea has committed to end its proliferation activities. There is no evidence that nuclear cooperation between Syria and North Korea extended beyond the date of the destruction of the reactor. An important argument for holding the Six Party deal together is that it brings North Korea into the fold, bit by bit, making it harder for it to slip back into the arena of illicit nuclear deals and keeping a bright light on its activities.

North Korea's decision to help Syria secretly construct a reactor merits close examination by the international community, the International Atomic Energy Agency, and Six Party members. Likely, they will find that economic considerations played a considerable role in North Korea's decision to enter into a proliferant relationship with Syria, which has long sought such a reactor.

As lawmakers weigh their options for addressing this matter, they should carefully consider the costs of further isolating North Korea at a time when engagement is working and is increasing U.S. and regional security. It is equally important not to allow the politicization of policy decisions with potentially grave consequences for North Asia, the Middle East, and the United States.

Background: How ISIS identified the reactor site in October 2007

In the fall of 2007, ISIS was faced with conflicting reports from media and government officials as to the type of facility struck by Israel and the extent of North Korea's role in the project. Our first step was to attempt to locate the facility in commercial satellite imagery.

We acquired large swaths of commercial imagery covering much of the area surrounding the Euphrates River in the Dayr Az Zawr region of Syria. Early media reports identified this area as the location of the attacked site. After the media reported the site was likely a nuclear reactor, we started to look for facilities with characteristics of a reactor or reactor construction. Based on a range of physical characteristics and geographical clues from media reports and ISIS sources, the site identified in the October 25 ISIS report stood out as one with the characteristics consistent with a reactor or a reactor under construction.

We measured the footprint of the Yongbyon reactor building and compared it to that of the suspected reactor building in Syria and found the two footprints were approximately the same. We then shared our analysis of this site with the *Washington Post*, which confirmed with its own sources that the site was indeed the one bombed by Israel on September 6, 2007 and contained a nuclear reactor.