



## **NUCLEAR MATERIAL SEIZURE BY ISIL – A WAKEUP CALL**

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The seizure of nuclear material from three university sites in Mosul by the Islamic State of Iraq and the Levant (ISIL) in early June, though downplayed as not enough to cause widespread harm, confirms terrorists' interest in nuclear materials. Having its stronghold stretching from northeastern Syria into much of Iraq's north, the ISIL could easily get its hands on more materials from hospital waste, mining materials and other research equipment to produce a dirty bomb, which is alarming. This would leverage ISIL above all other terrorist outfits, putting the world into bewilderment.

The Iraqi Ambassador to UN Mohamed Ali Alhakim told UN Secretary-General Ban Ki-moon in a July 8 letter that nearly 40 kg (88 pounds) of uranium compounds, kept at a university, have been seized by terrorist groups.<sup>i</sup> As the exact details of the nuclear materials seized by the rebels from University of Mosul were not yet known, it is speculated that it could be laboratory chemicals or radiation shielding, consisting of natural or depleted uranium.<sup>ii</sup> More than a decade ago, the IAEA helped dismantle Iraq's clandestine nuclear programme and there should be no enriched uranium in Mosul. However, Baghdad's joining of the international Convention on the Physical Protection of Nuclear Materials (CPPNM) barely one month after the incident<sup>iii</sup> gives one the impression that Iraq tried "to get around its failure to declare these materials to the IAEA for many years".<sup>iv</sup> In that case, the Iraqis would be in further violation of their IAEA safeguards agreements.

One explanation is that the uranium compounds were taken from the Al-Jazeera Nuclear Material Feed Plant, west of Mosul, after it was bombed by coalition forces in 1991.<sup>v</sup> After the war, some equipment and instrumentation was known to have been taken to the University of Mosul and probably these were subsequently forgotten. Nevertheless, under the 1979 safeguards agreement with IAEA, Iraq should have declared and placed under international verification of all the materials.

Downplaying the incident, an IAEA spokesperson stated the stolen material was “low grade and would not present a significant safety, security or nuclear proliferation risk,” and not even suitable for a terrorist to make a dirty bomb.<sup>vi</sup> Even if the material stolen is 3.5 percent enriched uranium, refining would yield less than 2 kg of highly enriched uranium (HEU), far short of the 15 kg minimum requirement to produce a nuclear bomb. Given this assumption, can the world overlook the incident expecting that the ISIL would safe-keep the materials of no use? At the outset, whatever may be the degree of consequence, “any loss of regulatory control over nuclear and other radioactive materials is a cause for concern.”<sup>vii</sup> Second, even if the quantities of uranium involved are small, the ISIL could cause public panic or mass disruption by scattering uranium compounds mixed with conventional explosives.

Also, there is the view that “a dirty bomb itself is more theoretical than threat”. To that extent, there is no precedent of successful detonation of such a device by terrorists till date. There are only two recorded cases of dirty bombs being made by Chechen separatists in Russia, but neither was detonated.<sup>viii</sup> In 2006, UK national Dhiren Barot was convicted

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for conspiring to attack targets in the UK and US with dirty bombs, targeting parking garages as well as the New York Stock Exchange, the CitiBank building in Manhattan, and the Prudential building in Newark.<sup>ix</sup> However, unavailability of precedent should not give rise to any complacency.

Handling of nuclear materials is extremely hazardous and requires state-level resources to fabricate a nuclear device. However, in December 2013 when a truck containing highly radioactive cobalt-60 was stolen en route from a Mexican hospital to a disposal site, six people who came in contact with the materials suffered skin irritations and dizziness, but none died.<sup>x</sup> A terrorist organisation with required resources and strong will to master the terror potential of radioactive material can resort to nuclear terrorism. Certainly, a dirty bomb may not cause nuclear fallout, but any such attempt and consequent public panic would still be considered a success.

Despite the increasing global awareness and efforts to secure nuclear materials, the Mosul incident largely vindicates the mismatch between our capability/sincerity to secure the sources and the magnitude of threat on the ground. Whatever may be the amount of the missing material, the failure lies squarely on both Iraq and the international community.

Without playing any blame game, the urgency is to respond to the wakeup call collectively to secure the missing material anyhow from the terrorists. In a letter to the UN, Iraq has appealed for international help to “stave off the threat” of the use of the nuclear material by terrorists in Iraq or abroad.<sup>xi</sup> Since the ongoing Iraqi problem is not likely to subside soon, it would be prudent for the IAEA in cooperation with the Iraqi government and other regional players to monitor the rebels’ movements and activities closely. Though a difficult proposition, all concerned should draw out contingent plans to extract the materials, instead of down playing the threat involved.

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*(Disclaimer: The views and opinions expressed in this article are those of the author and do not necessarily reflect the position of the Centre for Air Power Studies CAPS)*

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i "UPDATE 4-Seized Nuclear Material in Iraq "Low Grade" - UN Agency", <http://uk.reuters.com/article/2014/07/10/iraq-security-iaea-idUKL6NOPL1RM20140710>, July 10, 2014.

ii Ibid.

iii "Nuclear Security Lapse in Iraq", <http://www.world-nuclear-news.org/RS-Nuclear-security-lapse-in-Iraq-1007141.html>, July 10, 2014.

iv Bob Kelley, "Analysis: The Strange Case of Iraq's Missing Uranium", <http://www.janes.com/article/40725/analysis-the-strange-case-of-iraq-s-missing-uranium>, July 14, 2014.

v Ibid.

vi "Seized Nuclear Material in Iraq "Low Grade" - U.N. Agency", <http://www.thestar.com.my/News/World/2014/07/11/UN-nuclear-agency-says-believes-seized-Iraq-materials-low-grade/>

vii Ibid.

viii Perry Chiamonte, "Stolen Uranium Compounds not Only Dirty Bomb Ingredients within ISIS' Grasp, Say Experts", *FoxNews.com*, July 19, 2014.

ix Ibid.

x "Dirty Bomb' Theft: Police Seal Off Mexican Hospital after Six are Admitted for Radiation Poisoning", <http://www.dailymail.co.uk/news/article-2519612/Police-block-access-Mexico-hospital-admitted-radiation-exposure.html>, December 06, 2013.

xi "Iraq Requests Outside Help after ISIL Seizes Nuclear Materials", <http://www.voanews.com/content/iraq-requests-outside-help-after-isil-seizes-nuclear-materials/1954986.html>, July 10, 2014.

