

Nuclear Security: A Casualty of Moscow's Involvement in Ukraine

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Russia's formal annexation of the Crimea on March 18, 2014¹ has had at least two deleterious consequences for nuclear security. The first is that, worryingly, its involvement in Ukraine has caused Russia to de-prioritize tangible nuclear security cooperation with Washington. The second is it signaled a change in Moscow's hierarchy of interests: with Crimea a top foreign policy priority, other aims, such as; renewed G7 membership, or an economic climate favorable to the implementation of the recently concluded Russia-China gas accord, have become increasingly peripheral. These shifts highlight the importance Moscow attaches to its involvement in the Crimea and Eastern Ukraine.

Following the collapse of the Soviet Union, Russia inherited 650 metric tons of fresh or lightly irradiated highly enriched uranium (HEU) and plutonium,² enough material to produce 40,000 nuclear bombs.³ At the same time Russian civilian nuclear facilities, such as scientific research institutes that conduct research using weapons grade materials and sites used to store

¹ Meyers, Steven Lee and Barry, Ellen. "Putin Reclaims Crimea for Russia and Bitterly Denounces the West." *The New York Times*. March 18, 2014. http://www.nytimes.com/2014/03/19/world/europe/ukraine.html?_r=0. Accessed on May 3, 2014.

² Matthew Bunn and Anthony Wier, *Securing the Bomb 2007*. Washington: Project on Managing the Atom, Harvard University, and Nuclear Threat Initiative, 2007. 14. http://www.nti.org/media/pdfs/securing-the-bomb-2007-fullreport.pdf?_id=1322767524 Accessed on June 29, 2007. Herein, the term "plutonium" refers to weapons-grade plutonium.

³ United States, U.S. General Accounting Office, *Nuclear Nonproliferation: Limited Progress in Improving Nuclear Material Security in Russia and the Newly Independent States*. Washington: GAO, 2000. 3. <http://www.gao.gov/assets/230/228785.pdf>. Accessed on February 17, 2012.

excess fissile material,⁴ became subject to lower security measures, which rendered the dangerous materials stored at these locations highly susceptible to terrorist seizure and use,⁵ as well as diversion by determined insiders.⁶ Once obtained, terrorists and other non-state actors could fashion such HEU and plutonium—also termed dual-use material—into a crude nuclear explosive device, or a “dirty bomb”, with relative ease. Since 1993, there have been 2,331 known incidents of illicit nuclear materials trafficking worldwide.⁷ Although it is impossible to determine whether any of these incidents have resulted in enough nuclear material “leaking out” of the former Soviet Union (FSU) to enable terrorists to construct an atomic bomb, there is reason for concern.⁸

The limited amount of publicly available data supports fears that the risk of nuclear theft is highest in Russia.⁹ A worrisome precedent was set when the first case involving the theft or

⁴ For security weaknesses of Russian scientific research institutes see Blair, Bruce G. “Russian Control of Nuclear Weapons” in Quester, George, ed. *The Nuclear Challenge in Russia and the New States of Eurasia*. Vol. 6. 10 vols. Armonk, New York: M. E. Sharpe, 1995. 72 and III, Rensselaer W. Lee. *Smuggling Armageddon: The Nuclear Black Market in the Former Soviet Union and Europe*. New York: St. Martin's Press, 1998. 114-115. Security risks posed by Russian excess HEU and plutonium are outlined by Baker, John C. *Non-Proliferation Incentives for Russia and Ukraine*. Adelphi Paper 309. New York: Oxford University Press, Inc., 1997. 63-64; Kassenova, Togzhan. *From Antagonism to Partnership: The Uneasy Path of the U.S.-Russian Cooperative Threat Reduction*. Stuttgart: ibidem-Verlag, 2007. 209-239.

⁵ Bunn and Wier (2007), 14.

⁶ National Intelligence Council. “Annual Report to Congress on the Safety and Security of Russian Nuclear Facilities and Military Forces.” 2011 report, <https://s3.amazonaws.com/s3.documentcloud.org/documents/1019097/2011-report.txt>, 2. Accessed on May 30, 2014.

⁷ This figure includes known incidents for the period of January 1993 - December 2012. International Atomic Energy Agency “The Illicit Trafficking Database” (ITDB), <http://www-ns.iaea.org/security/itdb.asp>. Accessed on February 2, 2012. These are the most current figures available as of May 2013.

⁸ Concern with nuclear smuggling, according to Mohamed ElBaradei, former Director General of the IAEA, stems from uncertainty regarding the scope of the problem. Namely, that “[a] large percentage of the materials reported as lost or stolen are never recovered [while a] large percentage of materials which are recovered have not been previously reported as missing.” ElBaradei, Mohamed. “Reviving Nuclear Disarmament” (statement at the Conference on Achieving the Vision of a World Free of Nuclear Weapons, Oslo, Norway, February 26, 2008.) <http://www.iaea.org/newscenter/statements/2008/ebsp2008n002.html>. Accessed on February 9, 2013.

⁹ Bunn and Wier (2007), v.

diversion of direct-use material occurred in Russia in 1992¹⁰, and it is not believed to be a singular event. In fact, an assessment by the U.S. National Intelligence Council concluded that “it is likely that undetected smuggling has occurred [from Russian nuclear facilities], and we are concerned about the total amount of material that could have been diverted over the last 15 years.”¹¹ Perhaps even more critical than the quantity of leaked Russian nuclear material is the observation that “nearly all of the stolen [highly enriched uranium] and plutonium that has been seized over the years had never been missed when it was originally stolen.”¹² Not only does this circumstance augment the likelihood that Russian nuclear material could have been diverted undetected, but it also calls into question Moscow’s past denials of known nuclear smuggling incidents.

One illustrative incident involves the interdiction in June 2011 of a criminal syndicate, whose members (including Russian nationals) attempted to sell at least 4.4 kilograms of Russian-origin HEU in North Africa.¹³ Russian officials’ categorical dismissal of the U.S. finding

¹⁰ United States, U.S. General Accounting Office, *Nuclear Nonproliferation: Status of U.S. Efforts to Improve Nuclear Material Controls in Newly Independent States*. Washington: GAO, 1996. <http://www.gao.gov/assets/160/155404.pdf>. 25. Accessed on March 12, 2012.

¹¹ Bunn and Weir (2007), 17. Although experts have been unable to determine the exact amount of fissile material that has been diverted to non-state actors since the collapse of the USSR, (Graham Allison, *Nuclear Terrorism: The Ultimate Preventable Disaster*. New York: Times Books, Henry Holt and Company, LLC, 2004, 46) Graham Allison, Director of the Belfer Center for Science and International Security at Harvard University, asserts that “there can be no doubt about the fact that nuclear material to build more than twenty nuclear weapons was lost in the transition from the Soviet Union to Russia.” (*Ibid.*, 10). See also, Bukharin, Oleg. “Security of Fissile Materials in Russia.” *Annual Review of Energy and Environment*. 21: 467-95, 1996. <http://www.annualreviews.org/doi/pdf/10.1146/annurev.energy.21.1.467>. Accessed on February 9, 2013. 469. Bunn, Matthew. “Cooperation to Secure Nuclear Stockpiles: A Case of Constrained Innovation.” *Innovations*, Vol. 1, Issue 1: Winter 2006, 115-137. http://belfercenter.hks.harvard.edu/files/innov0101_cooperationtosecurenuclearstockpiles.pdf. Accessed on February 9, 2013. 121.

¹² Matthew Bunn, as quoted in Bass, Frank. “Moscow’s struggle to protect nuclear material.” *Al Jazeera*. February 18, 2014. <http://www.aljazeera.com/indepth/features/2014/02/moscow-struggle-protect-nuclear-material-201421710591960385.html>. Accessed on April 11, 2014.

¹³ A spokesman for ROSATOM, the Russian Federal Ministry of Atomic Energy, dismissed the possibility that the HEU is of Russian origin as “grandmother’s fairy tales.” Matthews, Owen. “A New Nuclear Scare Rocks Eastern Europe.” *The Daily Beast*. <http://www.thedailybeast.com/articles/2011/06/30/uranium-smuggling-arrests-in-moldova-revive-security-debate.html>. Accessed on March 5, 2012.

identifying the HEU as being of Russian origin¹⁴ was remarkably similar to Moscow's response to an earlier incident in 2006, when a Russian national attempted to smuggle 100 grams of weapons-grade uranium over the Russia-Georgia border.¹⁵ Indeed, nongovernmental studies, while noting some progress in security measures, have cited disturbingly lax security practices and other vulnerabilities in the Russian nuclear complex.¹⁶ As demonstrated above, persistent uncertainties exist regarding the security of select components of the Russian nuclear arsenal. There is also a real threat—as well as past instances—of theft, seizure, or diversion of select Russian nuclear material. Once diverted, it would be relatively easy to construct, transport, and detonate a crude nuclear explosive device.¹⁷ For a state-sponsored program, the difficulty in constructing a nuclear weapon lies first in legally acquiring the requisite nuclear material, and, later, in the miniaturization required to mount a nuclear warhead atop a guided missile. Terrorists and non-state actors are not bound by such considerations. Russia's recent invasion of Crimea already has destabilized aspects of Moscow's nuclear cooperation with Washington. This, coupled with other factors, could have serious consequences.

¹⁴ Digges, Charles. "International Investigation Targets Russian Weapons-Grade Uranium Smuggling." *Bellona Foundation*. http://www.bellona.org/articles/articles_2011/uranium_ring. Accessed on March 5, 2012.

¹⁵ This is a reference to the January 2006 attempt by Oleg Khinstagov, a Russian national, to smuggle 100 grams of weapons-grade uranium over the Russia-Georgia border. As in the most recent case, the 2006 sample was identified as being of Russian origin by U.S. government labs, (Sheets, Lawrence, Scott. "A Smuggler's Story," *The Atlantic Monthly* Apr. 2008; <http://www.theatlantic.com/magazine/archive/2008/04/a-smuggler-8217-s-story/6736>. Accessed on February 2, 2012. 3.) a finding which was rejected by the Russian Federal Security Service (FSB). (*Ibid.*, 4.)

¹⁶ Bunn and Weir (2007), v-vi. More recently, a January 2014 report by the Nuclear Threat Initiative assessed that "Russia's control of [nuclear] materials was in the bottom third of nuclear states." According to the document, the risk factors facing the Russian nuclear complex, second only to those of Pakistan, include; "political instability, ineffective governance, pervasive corruption, and the presence of groups determined to obtain nuclear materials." NTI Nuclear Materials Security Index. "Building a Framework for Assurance, Accountability, and Action." Second Edition. January 2014. <http://ntiindex.org/wp-content/uploads/2014/01/2014-NTI-Index-Report1.pdf>. Accessed on May 3, 2014. 21.

¹⁷ Bunn and Wier (2007), 18-19.

The covert deployment of the Russian military in Crimea earlier this year, originally repudiated by Moscow,¹⁸ preceded the formal annexation of the territory on March 18 by Russian President Vladimir Putin.¹⁹ The international response was immediate and wide-ranging, including such punitive measures as targeted U.S. and EU sanctions against several dozen top Russian officials, along with less tangible punishments, like the suspension of Russia's membership in the G8. Moscow does not appear eager to re-instate its membership.²⁰ The annexation of Crimea and the resulting instability in Ukraine also had an adverse effect on Moscow's cooperation in nuclear security initiatives, thus imperiling nuclear material protections in Russia.

The above-mentioned view is not universal. For instance, the Obama administration has attempted to downplay the impact of the Russian annexation of the region on nuclear security initiatives.²¹ Republicans in the U.S. House of Representatives, by contrast, have passed a bill to block the administration from continuing the implementation of the New START accord in Russia until "Moscow is deemed in compliance with several other arms control agreements, is 'no longer illegally occupying' the Crimean Peninsula, and ceases destabilizing activities in other

¹⁸ Putin eventually admitted the involvement of Russian special forces in Crimea. However, he continues to dispute assertions that these soldiers do not don military uniforms or insignia in an effort to pose as local "pro-Russian sympathizers." See MacAskill, Ewen. "Does U.S. evidence prove Russian special forces are in eastern Ukraine?" *The Guardian*. April 22, 2014. <http://www.theguardian.com/world/2014/apr/22/-sp-does-us-evidence-prove-russian-special-forces-are-in-eastern-ukraine>. Accessed on May 3, 2014.

¹⁹ Meyers, Steven Lee and Barry, Ellen. "Putin Reclaims Crimea for Russia and Bitterly Denounces the West." *The New York Times*. March 18, 2014. http://www.nytimes.com/2014/03/19/world/europe/ukraine.html?_r=0. Accessed on May 3, 2014.

²⁰ Unattributed. "Russia not clinging to G8 if West does not want it - Russian FM." *RT*. March 25, 2014. <http://rt.com/news/lavrov-g8-crimea-kerry-933/>. Accessed on June 19, 2014.

²¹ Guarino, Douglas, P. "U.S. Officials Downplay Impact of Ukraine Crisis on Nuclear Security Efforts." *Global Security Newswire*. April 2, 2014. <http://www.nti.org/gsn/article/us-officials-downplay-impact-ukraine-crisis-nuclear-security-efforts/>. Accessed on April 11, 2014.

parts of Ukraine.”²² Conversely, some observers have argued that fears that Russia’s annexation of the Crimea will undermine international nuclear security efforts “are exaggerated.”²³

Commentators holding such views advance arguments based on values, or interests. Broadly, the first argument holds that shared, long-standing, and immutable values between Moscow and Washington have prevented and will continue to prevent the breakdown of U.S.-Russian nuclear security cooperation in the face of passing crises, including that in Crimea. The second argument holds that U.S.-Russian nuclear security collaboration is at the mercy of ever-changing interests. The latest iteration of these is Moscow’s shifting interests following the annexation of the Crimea.

Proponents of the values-based argument assert that common values, which prevented the breakdown of nuclear security cooperation between Moscow and Washington even at the nadir of Russian-American relations during the Cold War, likewise will avert the collapse of nuclear security cooperation between the two countries following Moscow’s annexation of Crimea. Moscow’s constructive participation as planned in the Nuclear Security Summit following the events in Crimea is indicative, in this view, of shared values overcoming the current political concern. Moreover, underscoring the permanence and intractability of values in this case, Matthew Moran, Lecturer in International Security and Deputy Director of the Centre for Science and Security Studies at King's College London, and Matthew Cottee, Research Associate

²² Oswald, Rachel. “House Passes Bill Blocking U.S.-Russian Arms Control Funds.” *Global Security Newswire*. May 22, 2014. <http://www.nti.org/gsn/article/house-passes-bill-blocking-new-start-implementation/?mgs1=ed0efZ12hy>. Accessed on May 30, 2014.

²³ Moran, Matthew; Cottee, Matthew. “Nuclear security: too important to fail.” *The Guardian*. April 3, 2014. <http://www.theguardian.com/world/julian-borger-global-security-blog/2014/apr/03/nuclear-weapons-russia>. Accessed on April 11, 2014.

at King's College London, hold that even a further breakdown of diplomatic relations “probably would not” undermine future nuclear security efforts.²⁴

Another explanation for Russia’s continued collaboration in bi- and multi-lateral nuclear security initiatives following the annexation of Crimea is based on common interests. For instance, George P. Shultz and Sam Nunn attribute Russia’s continued engagement in nuclear security efforts to Moscow’s identification of the same as “an area of common interest where cooperation remains crucial to [its] security.”²⁵ Unlike values, which tend to endure over time, interests - particularly as assessed by leaders - can and do change in response to geopolitical developments.²⁶ By annexing Crimea and subsequently deploying Russian military personnel to destabilize Odessa,²⁷ Putin is indicating that Moscow’s hierarchy of interests has changed.

Above all, Russia claims to be threatened by the possibility of bordering on a Western military alliance, should Ukraine join NATO.²⁸ Moscow is willing to risk incurring international

²⁴ Moran, Matthew; Cottey, Matthew. “Nuclear security: too important to fail.” *The Guardian*. April 3, 2014. <http://www.theguardian.com/world/julian-borger-global-security-blog/2014/apr/03/nuclear-weapons-russia>. Accessed on April 11, 2014.

²⁵ Shultz, George P; Nunn, Sam. “How to deal with Russia without reigniting a full-fledged Cold War psychology.” *The Washington Post*. March 27, 2014. http://www.washingtonpost.com/opinions/the-us-strategy-for-keeping-ukraine-safe-from-russian-aggression/2014/03/27/d35c9210-b394-11e3-8020-b2d790b3c9e1_story.html. Accessed on April 15, 2014.

²⁶ Saradzhyan, Simon. “How Russia's Red Line in Ukraine Got Real.” *Russia Direct*, April 16, 2014. <http://www.russia-direct.org/content/how-russias-red-line-ukraine-got-real>. Accessed on May 4, 2014.

²⁷ While the involvement of Russian military personnel has yet to be confirmed officially, their absence in Odessa is “implausible.” Further, their presence in Odessa is logical, given their acknowledged engagement in the Crimea. For the quote see, Unattributed. “Russia and Ukraine: Insatiable.” April 19, 2014. <http://www.economist.com/news/leaders/21600979-cost-stopping-russian-bear-now-highbut-it-will-only-get-higher-if-west-does?frsc=dg%7Cc>. Accessed on May 4, 2014.

²⁸ The reason for Putin’s actions in Ukraine is widely debated. Select other explanations given include; because he can - i.e. no one will stop him, Ukraine is only a first step in his plan to restore as much of the former USSR as possible, and that current developments are an attempt by Moscow to protect ethnic Russians in Ukraine, not to invade the country. For the first view see footnote 26. The second is here: Kwasniewski, Aleksander. “After Ukraine Putin will seize Belarus, Kazakhstan and Latvia.” *Charter 77*, May 2, 2014. <http://charter97.org/en/news/2014/5/2/97005/>. Accessed on May 4, 2014. The third view is here: Loiko, Sergei L. “Russia may invade Ukraine to protect locals.” *The Los Angeles Times*. April 17, 2014. <http://www.latimes.com/world/worldnow/la-fg-wn-putin-ukraine-20140417,0,469177.story#axzz30ILDzFXZ>. Accessed on May 4, 2014.

opprobrium, targeted economic sanctions against top officials, the threat of additional sanctions against sectors of the Russian economy,²⁹ and provoking a full-scale war in Ukraine.³⁰ Moscow may yet have to reverse its stance. Expanding the scope of economic sanctions, which have to date inflicted only “psychological, not tangible” damage,³¹ may force Moscow to re-prioritize its interests once again. The recently signed \$400 billion USD Russia-China gas deal provides another impetus to re-prioritize stability in Crimea and eastern Ukraine. Continued instability there could dampen investor confidence and thus could threaten the implementation of the accord. That is a large gamble, since the gas agreement strengthened the ruble against the U.S. dollar and the Euro for the first time since February 2014.³² Regardless, its involvement in Ukraine has caused Russia to de-prioritize tangible nuclear security cooperation. This has impeded progress on several U.S.-Russian nonproliferation initiatives. Given the outstanding vulnerabilities of select Russian nuclear materials, the documented incidents of nuclear material smuggling, and the increased threat of terrorist diversion of the same, Moscow’s de-prioritization is cause for concern.

Since becoming involved in Ukraine, Moscow has decreased its engagement in select substantive U.S.-Russian nonproliferation efforts. Although Russian representatives signed a non-binding declaration on adopting universal standards for securing weapons-usable nuclear

²⁹ Baker, Peter; Andrew, Kramer. “So Far, U.S. Sanctions Over Ukraine May Be Inflicting Only Limited Pain on Russia.” *The New York Times*. May 2, 2014. <http://www.nytimes.com/2014/05/02/world/europe/so-far-us-sanctions-over-ukraine-may-be-inflicting-only-limited-pain-on-russia.html?rref=world/europe&module=Ribbon&version=context®ion=Header&action=click&contentCollection=Europe&pgtype=article>. Accessed on May 4, 2014.

³⁰ This is a real possibility, according to former U.S. Ambassador to Russia, Michael McFaul. See Crowley, Michael. “Former Ambassador to Moscow Warns of War in Ukraine.” *Time Magazine*. May 3, 2014. <http://time.com/86835/michael-mcfaul-ukraine-russia-war/>. Accessed on May 4, 2014.

³¹ See footnote 29.

³² Gaydayev, Vitaliy. “Gas Contract on the Ruble: Gazprom’s Deal with China Raised the Rate of the Russian Currency.” *Kommersant*. May 22, 2014. <http://www.kommersant.ru/doc/2476739>. Accessed on May 30, 2014.

material,³³ progress in several existing, binding nonproliferation initiatives between Moscow and Washington has stalled. For example, negotiations between the two countries regarding the accord intended to replace the now-expired Cooperative Threat Reduction (CTR) umbrella agreement has been delayed by the Ukraine crisis. The delay could be prolonged, if Moscow remains involved in Ukraine.³⁴ In addition, it is unclear whether work on initiatives to secure Russian nuclear and radiological materials at fixed sites and in transit and to help establish a sustainable nuclear security culture are ongoing.³⁵ Further, Russia's suspension from the G8 - one of the consequences of its annexation of Crimea - has "already disrupted global initiatives aimed at preventing the spread of weapons of mass destruction and fissile material under [its] auspices."³⁶ One such casualty is the Global Partnership Against the Spread of Weapons and Materials of Mass Destruction (also known as the "10 Plus 10 Over 10 Program.")³⁷

As discussed above, not only has undetected smuggling of Russian nuclear material likely occurred,³⁸ but terrorists - including those affiliated with Al Qaeda and other organizations - have

³³ Guarino, Douglas, P. "U.S. Officials Downplay Impact of Ukraine Crisis on Nuclear Security Efforts." *Global Security Newswire*. April 2, 2014. <http://www.nti.org/gsn/article/us-officials-downplay-impact-ukraine-crisis-nuclear-security-efforts/>. Accessed on April 11, 2014.

³⁴ Guarino, Douglas, P. "U.S. Officials Downplay Impact of Ukraine Crisis on Nuclear Security Efforts." *Global Security Newswire*. April 2, 2014. <http://www.nti.org/gsn/article/us-officials-downplay-impact-ukraine-crisis-nuclear-security-efforts/>. Accessed on April 11, 2014.

³⁵ Guarino, Douglas, P. "U.S. Officials Downplay Impact of Ukraine Crisis on Nuclear Security Efforts." *Global Security Newswire*. April 2, 2014. <http://www.nti.org/gsn/article/us-officials-downplay-impact-ukraine-crisis-nuclear-security-efforts/>. Accessed on April 11, 2014.

³⁶ Borger, Julian. "World leaders fear Ukraine crisis will harm nuclear cooperation." *The Guardian*. March 23, 2014. <http://www.basiscint.org/news/2014/world-leaders-fear-ukraine-crisis-will-harm-nuclear-cooperation>. Accessed on April 11, 2014.

³⁷ Began in 2002, the program committed the G-7 to raising up to \$20 billion over the next 10 years to fund nonproliferation projects, principally in Russia but also in other nations. The initiative calls for the United States to contribute \$10 billion, and the other original G-7 nations a combined \$10 billion to help Russia and other nations destroy their weapons of mass destruction (WMD) stockpiles. For more information, see <http://www.nti.org/treaties-and-regimes/global-partnership-against-spread-weapons-and-materials-mass-destruction-10-plus-10-over-10-program/>.

³⁸ See footnote 11.

expressed interest in and have attempted to obtain nuclear materials and other WMD.³⁹ The recent splintering and devolution of Al Qaeda as a consequence of leadership losses has made it more difficult for central Al Qaeda leaders to ensure that their orders are followed.⁴⁰ Thus, in addition to diversion by determined insiders, Russian nuclear materials now could be under two types of terrorist threats from Al Qaeda. A “sanctioned” attack by an Al Qaeda leader ordering the diversion of such assets, and a lone, “un-sanctioned” attack by a current or former member of the organization. This new potential element is yet another reason to augment nuclear material security in Russia. However, instead of increased cooperation in this sphere, U.S.-Russian nuclear security efforts have been disrupted as a consequence of Moscow’s prioritization of its involvement in Ukraine.

Russia’s campaign to destabilize parts of Ukraine has had deleterious effects on nuclear security cooperation between Moscow and Washington. Select programs that address persistent weaknesses in Russian nuclear material security have been stymied at a time when their continuation is critical. Nuclear material smuggling has occurred in Russia, continues to pose a real threat, and should be perceived as such by both parties. Rather than being held hostage to current political considerations, joint nuclear security work should proceed unhindered. To facilitate such an outcomes, policymakers should strive to understand and address Moscow’s interests. While at times divergent from those of Washington, they are nevertheless to be

³⁹ Mowatt-Larssen, Rolf. “Al Qaeda Weapons of Mass Destruction Threat: Hype or Reality?” *The Belfer Center for Science and International Affairs, Harvard University*. January 2010. <http://belfercenter.ksg.harvard.edu/files/al-qaeda-wmd-threat.pdf>. Accessed on May 4, 2014. See, for example, pp. 2-3.

⁴⁰ Ohlheiser, Amy. “The State Department Warns of an ‘Evolved,’ Decentralized Al Qaeda.” *The Wire*. May 1, 2014. <http://www.thewire.com/politics/2014/04/the-state-department-warns-of-an-evolved-decentralized-al-qaeda/361452/>. Accessed on May 4, 2014.

reckoned with on their own merit. The alternative may be a price no one should be willing to pay.

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Bunn, Matthew; Harrell, Eben; Malin, Martin B. "Progress on Securing Nuclear Weapons and Materials: The Four-Year Effort and Beyond." Cambridge: Project on Managing the Atom, Belfer Center for Science and International Affairs, Harvard University, March 2012. http://belfercenter.ksg.harvard.edu/files/Progress_In_The_Four_Year_Effort_web.pdf. Accessed on February 9, 2013.

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