

## The production and promotion by a Russian Federation company of a range of munitions containing chemical irritants:

### A briefing note for CWC States Parties<sup>i</sup>

12<sup>th</sup> September 2011

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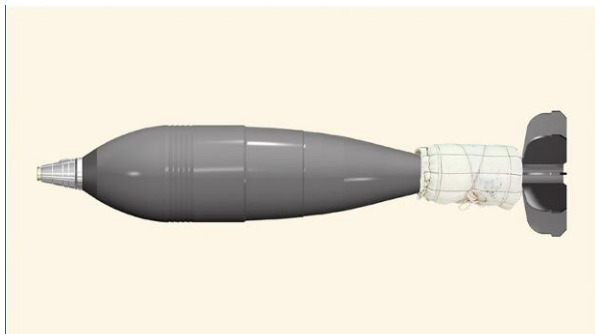
#### Introduction

1. The use of riot control agents (RCAs), such as 2-chlorobenzalmalononitrile (CS), dibenzoxazepine (CR) and 1-chloroacetophenone (CN) as a method of warfare is prohibited under the 1997 Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction (CWC). However, Article II (9) defines the purposes not prohibited under the Convention and “law enforcement including domestic riot control purposes” is one such purpose. This briefing paper summarises concerns relating to the reported production and marketing by at least one Russian company of a range of RCA munitions, some of which appear to have only military utility.

#### Production and Marketing of chemical irritant munitions

2. On 5th December 2002, the ITAR-TASS press agency reported a statement by the Director of the Russian Federation company, The Federal State Unitary Enterprise, State Research and Production Enterprise Bazalt (FSUE SRPE Bazalt) (Bazalt), declaring that his company was ready to offer to supply non-lethal munitions filled with chemical irritants for aeronautical delivery, portable grenade launchers and hand grenades.<sup>ii</sup> Subsequently, there have been further reports that Bazalt had developed a range of chemical non-lethal munitions.<sup>iii</sup>
3. In May 2009, the English language version of the 2006 “*Ordnance and munitions*” volume of “*Russia’s Arms and Technologies, the 21<sup>st</sup> Century Encyclopedia*”<sup>iv</sup> (a publication series supported by the Russian Federation Defense Ministry)<sup>v</sup> listed a range of ‘non-lethal’ munitions produced by Russian companies. Amongst those of potential concern include:

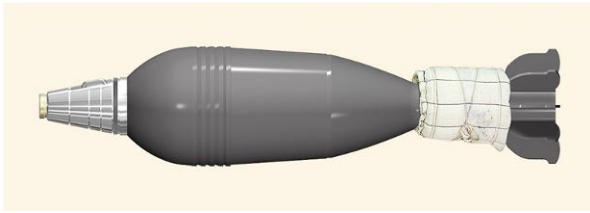
- *The 120-mm mortar shell filled with irritant-action pyrotechnic composition for Model 1938 and 2B11 mortars, for 2S9, 2S23 and 2B16 artillery pieces.* The mortar shell weighs 16kg and has a maximum range of fire of 5.2km (from 1938 model mortar), 6.8km (from 2b11 mortar) and 6.6km (from 2B16, 2S9 and 2S23 guns).



Images of 120mm chemical irritant mortar shell, 120mm self-propelled gun and 120mm mortar. All images from [www.arsenalrus.com](http://www.arsenalrus.com)



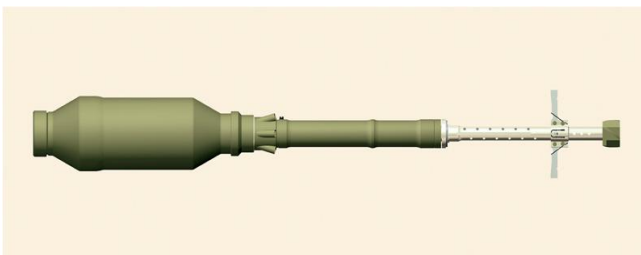
- The 82-mm mortar shell filled with irritant-action pyrotechnic composition for Model 1937 and 2B14-1 mortars and for 2B9 automatic mortar. The mortar shell weighs 3.5kg and has a maximum firing range of 2,670 metres. The round is available in two models: one piece and clustered. It has been developed from the 82mm standard mortar round using the S-8232S illumination shell.



Images of 82mm chemical irritant mortar shell, 2B9 automatic mortar and 2B14 mortar. All images from [www.arsenalrus.com](http://www.arsenalrus.com).



- The RPG-7 grenade launcher round with warhead filled with irritant-action pyrotechnic composition. The round is available in two models: one piece and clustered. It has been developed from the standard round fired by the RPG-7 grenade launcher. This 105mm calibre munition weighs 4.3kg and has an effective range of between 400-600 metres.



Images of RPG-7 grenade launcher and chemical irritant rounds. All images from [www.arsenalrus.com](http://www.arsenalrus.com).

- The obstacle-penetrating grenade filled with irritant-action pyrotechnic composition designed for the RPG-7 grenade launcher. This 105mm calibre munition weighs 4.3kg. It can be used to “suppress and temporarily incapacitate armed lawbreakers located in light field shelters, bunkers and city buildings... [and] to harass... armed offenders and as an antitank weapon.”

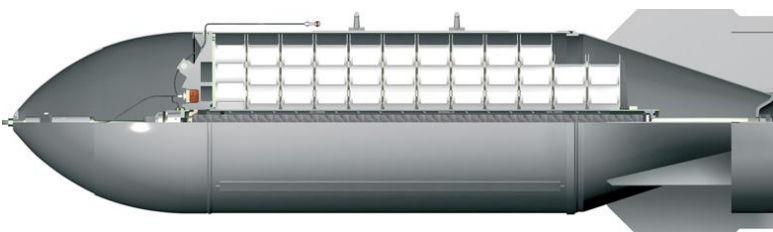


- The RSG-1 special rocket grenade for single-shot grenade launcher fitted with lachrymatory/irritation-action warhead. This 72.5mm calibre munition weighs 3.8kg.
- The 30-mm round with a grenade filled with irritant action pyrotechnic composition designed for the AGS-17 automatic grenade launcher. Although this 30mm munition is relatively small weighing 0.35kg, its maximum firing range is 1,700 metres and the maximum rate of fire is between 350-400 rounds per minute. It can be used to “temporarily incapacitate armed lawbreakers on the open or rough terrain and those hiding in buildings, various structures and vehicles.” Furthermore, “[i]t can also be used to harass armed offenders”.



Images of the 30mm chemical irritant grenade designed for AGS-17 automatic grenade launcher. All images from [www.arsenalrus.com](http://www.arsenalrus.com)

- The 500-kg cluster bomb packed with sub-munitions charged with irritant-action pyrotechnic composition. The publication states that “This cluster bomb has been developed from the standard 500kg cluster bomb packed with smoke submunitions. It is dropped from a fixed-wing or rotary-wing aircraft in an altitude span of 100 to 12,000m at a speed of up to 1,200 km/h...The bomb permits high concentrations of an irritant agent to be attained within a short time.”

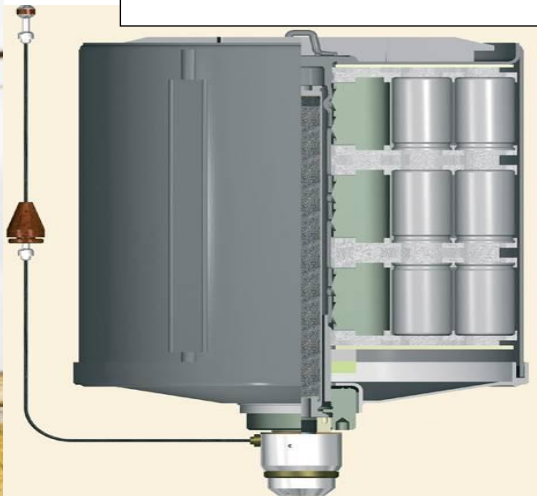


Images of 500kg cluster bomb containing chemical irritant. All images from [www.arsenalrus.com](http://www.arsenalrus.com).

- The heliborne KMGV-type dispenser of packages of sub-munitions filled with irritant-action pyrotechnic composition. The publications state that: *“These submunition packages are dispensed singly or all together from helicopters Mi-8MT and Mi-24 (four KMGV dispensers on external hardpoints) at an altitude of 50 to 300m at a flying speed of 150 to 300 km/h. They can also be dropped in the helicopter hovering mode.”*



Images of heliborne KMGV-type dispenser of packages containing RCA. All images from [www.arsenalrus.com](http://www.arsenalrus.com)



4. Whilst the *“Ordnance and Munitions”* publication does not specify which Russian company (or companies) manufactured these arms and munitions, *“Bazalt State Research and Production Enterprise (Federal State Unitary Enterprise)”* is listed among the 58 producers whose products were included in the volume. And the publication also states that:

*“Specialists of the SRPE Bazalt FSUE have developed a variety of non-lethal munitions filled with mixtures based on the CN, CS and CR irritant agents. Their application area includes airborne weapons, tube artillery and mortars, light grenade launchers and hand grenades. The SRPE Bazalt FSUE is prepared to supply these munitions to customers...The non-lethal munitions can be used in military and special operations, such as anti-terrorist, peace-keeping, anti-riot and police operations, as well as to restrict the escalation of armed conflicts and to free hostages. They can also be used in support of humanitarian missions.”<sup>vi</sup>*

In addition, although there are no details publicly available of the range of chemical irritant munitions currently manufactured and promoted by Bazalt, the company website when reviewed on 1<sup>st</sup> July 2011 stated that: *“The specialists of FSUE SRPE Bazalt have developed nonlethal ammunition for aircraft delivery, tube artillery and mortar-guns, hand grenade launchers and hand grenades.”<sup>vii</sup>* A subsequent review of the Bazalt website on 12<sup>th</sup> September 2011 showed that reference to *“aircraft delivery, tube artillery and mortar-guns”* had been removed.<sup>viii</sup>

Given the nature of several of the chemical irritant munitions described in the *“Ordnance and Munitions”* publication, it would appear that their use for riot control or other domestic law enforcement operations would be inappropriate. Consequently the manufacture, stockpiling and deployment of such munitions may potentially breach Article 1.1(a), 1.5 and 2.1a of the CWC. In addition, promotion and transfer of such munitions may potentially breach Article 1.1 (a) and Article 1.1 (d) of the Convention.

Further information has repeatedly been sought from Bazalt and the Russian Federation Government on the status of Bazalt’s chemical irritant munitions manufacture, marketing and transfer, and of the Russian Federation’s regulation, deployment and use of such munitions.<sup>ix</sup> To date, no response has been received from either party. Correspondence detailing our concerns was also sent to the Director General of the OPCW, for his information.<sup>x</sup> Correspondence subsequently received from the Legal Advisor to the OPCW stated that: *“I*

confirm that up to this date no State Party has yet raised the issue during the meetings of the Executive Council and has not put in motion consultations or requested the clarification of the issue.<sup>xvi</sup> As far as can be seen from open sources, there do not appear to have been any bilateral representations or dialogues on these issues to date. The OPCW Legal Advisor also stated that “the Technical Secretariat will put the issue before the pertinent Permanent Representation to the OPCW seeking their comments and/or appropriate action.”<sup>xvii</sup> To date, the results of such action have not been made public.

## Conclusions

1. Given the information publicly available concerning the nature and range of chemical irritant munitions described in “*Ordnance and munitions*” volume of “*Russia’s Arms and Technologies, the 21st Century Encyclopedia*” it appears that the use of such delivery systems for riot control or other law enforcement operations would be inappropriate.
2. Although there have been no reports, to date, of these munitions being used in military operations by the Russian Federation, nor of their being transferred to other entities, the development of such munitions itself appears potentially to be a breach of the CWC.
3. It appears that the Russian Federation Government has failed to fulfil its national implementation obligations under Article 7.1 of the Convention.<sup>xviii</sup> Production and promotion of a range of RCA munitions designed for military applications, is at variance with requirements set forth in Article 1 of the CWC.

## Issues for consideration by States Parties to the CWC

Under Article 1.1 of the Chemical Weapons Convention:

“Each State Party to this Convention undertakes **never under any circumstances:**

- (a) To develop, produce, otherwise acquire, stockpile or retain chemical weapons, or transfer, directly or indirectly, chemical weapons to anyone;
- (b) To use chemical weapons;
- (c) To engage in any military preparations to use chemical weapons;
- (d) To assist, encourage or induce, in any way, anyone to engage in any activity prohibited to a State Party under this Convention.” **[Emphasis added]**

Article 2.1 of the Chemical Weapons Convention, defines a chemical weapon as:

- (a) *toxic chemicals or their precursors, except where intended for purposes not prohibited by the Convention, **as long as the types and quantities are consistent with such purposes;***
- (b) *munitions and devices specifically designed to cause death or other harm through the toxic properties of those toxic chemicals specified in subparagraph (a), which would be released as a result of the employment of such munitions and devices;...* **[Emphasis added]**

Amongst the “purposes not prohibited” defined under Article 2.9 of the Convention are:

- (c) *Military purposes not connected with the use of chemical weapons and not dependent on the use of the toxic properties of chemicals as a method of warfare;*
- (d) *Law enforcement including domestic riot control purposes.*

According to a number of international lawyers and arms control experts, a range of munitions containing RCAs which have military utility, such as cluster munitions, aerial bombs, mortar rounds and artillery shells would be inherently unacceptable for use in law enforcement activities.<sup>xiv</sup> Such munitions would potentially breach the CWC ‘*types and quantities*’ provision<sup>xv</sup> and the prohibition on use of RCAs as a ‘*method of warfare*’.<sup>xvi</sup> To date, the OPCW has not formally addressed the regulation of large calibre RCA munitions under the CWC and until recently no State Party had publicly established its position in this regard.<sup>xvii</sup>

## Civil society attempts to raise the issue of large calibre RCA munitions

Civil society has previously sought to raise the issue of large calibre RCA munitions and to highlight specific cases of concern with the OPCW through a number of mechanisms. For example, concerns relating to the production of chemical irritant munitions by Bazalt were originally raised by a representative of the Federation of American Scientists in May 2003<sup>xviii</sup> at an Open Forum meeting addressed by then OPCW Director General and attended by a number of State Party delegations to the CWC First Review Conference. Further information on this case was

documented by the BNLWRP in October 2009<sup>xxix</sup> and subsequently reported in the media.<sup>xxx</sup> Similar concerns regarding the manufacture and promotion of a 120mm mortar round containing CS by a Turkish company have been publicly documented by the BNLWRP in October 2009<sup>xxxi</sup>, reported in the media thereafter<sup>xxxii</sup> and subsequently brought to the attention of CWC States Parties in consecutive Open Forum meetings held on the margins of CSP-14<sup>xxxiii</sup> and CSP 15,<sup>xxxiv</sup> as well as through a range of briefing papers prepared by BNLWRP, ORF and ISS.<sup>xxxv</sup> However, a review of relevant open source documents shows that no CWC States Party has yet raised the issue of large calibre RCA munitions publicly under the auspices of the CWC, nor initiated any of the Convention's Article IX provisions regarding specific munitions or programmes of concern.

Consequently, on 6th July 2011, BNLWRP, ORF and ISS wrote to Ambassador Goosen, the current Chairperson of the Executive Council (EC), requesting that concerns relating to the development and promotion of a range of large calibre munitions containing RCAs be brought to the attention of the EC for its consideration. On 7th July 2011, Ambassador Goosen responded, stating he would in his *"capacity as Chairperson of the Executive Council... raise the issue in the Executive Council Bureau in its preparations for the 66th Session of the Council, which is scheduled to take place in October 2011."*<sup>xxxvi</sup>

In a subsequent letter, dated 22nd July 2011, Ambassador Goosen explained that *"as indicated in my previous communications, I raised your request that the issue of "large calibre munitions containing riot control agents (RCA)" be included on the agenda of the Executive Council at a recent meeting of the Council's Bureau. The Bureau concluded that according to the rules and practice of the OPCW it would not be possible for either the Chairperson or the Bureau to include the issue on the Council agenda... Rule 16 of the Rules of Procedure of the Executive Council establishes that items may only be introduced on the agenda of the Council by the Council itself, the Conference of the States Parties, Members of the Organisation or, in specific circumstances, the Director-General."*<sup>xxxvii</sup>

### Recommendations for CWC States Parties

Given the dangers of the proliferation and misuse of large calibre RCA munitions, we believe that the Convention's Member States should address this issue as a matter of urgency. However, it is clear that despite the efforts of individual Government officials and diplomats, appropriate and effective mechanisms allowing civil society to bring this matter to the attention of the policy making organs of the Organisation do not currently exist.

We are, therefore, calling upon individual CWC States Parties and/or the Director General to raise this issue with the appropriate policy making organs such as the Executive Council and/or during the forthcoming Conference of States Parties, with a view to the:

- **development of criteria and a suitable process for determining which forms of large calibre RCA munitions and other forms of RCA dispersal and means of delivery are inappropriate for law enforcement purposes and would breach Article 2.1 and/or Article 1.5 of the CWC, with States Parties consequently being prohibited from developing, producing, stockpiling, transferring or using such means of delivery or dispersal.**

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<sup>i</sup> This briefing paper has been produced jointly by Bradford Non-Lethal Weapons Research Project (BNLWRP), Omega Research Foundation (ORF) and Africa's Development and Threat of Weapons of Mass Destruction Project of the Institute for Security Studies (ISS).

<sup>ii</sup> ITAR-TASS, 5th December 2002, Предприятие "Базальт" готовится к выпуску боеприпасов для антитеррористической операции, available from Bazalt website. <http://www.bazalt.ru/pr-itar-tass51202.htm> (last accessed 25th July 2009)

<sup>iii</sup> See for example: Non lethal weapon a powerful means of countering terrorism, Defense Technologies, March 2008, vol.6, no.1, <http://www.armstass.su/data/Files/File/109.pdf>, (accessed 1<sup>st</sup> July 2011), p.20

<sup>iv</sup> Non-lethal munitions section, Volume 12 "Ordnance and Munitions" (English language version), "Russia's Arms and Technologies. The XXI Century Encyclopedia", version 2006.1eng, Arms and Technologies Publishing House, 5th May 2009 (copy held by the author).

<sup>v</sup> See Publishing House "Arms and Technologies" website: <http://www.orteh.com/eng/company/facts/> (accessed 1<sup>st</sup> July 2011)

<sup>vi</sup> Non-lethal munitions section, Volume 12 "Ordnance and Munitions" (English language version), "Russia's Arms and Technologies. The XXI Century Encyclopedia", version 2006.1eng, Arms and Technologies Publishing House, 5th May 2009 (copy held by the author).

<sup>vii</sup> Bazalt website: [http://www.bazalt.ru/en/marine\\_grenade\\_launchers/](http://www.bazalt.ru/en/marine_grenade_launchers/) (accessed 1<sup>st</sup> July 2011).



- viii Bazalt website: [http://www.bazalt.ru/en/marine\\_grenade\\_launchers/](http://www.bazalt.ru/en/marine_grenade_launchers/) (accessed 12<sup>th</sup> September 2011).
- ix Letters were sent by BNLWRP to Bazalt, the Russian Federation Ministry of Foreign Affairs and Russian Federation Ministry of Defence on 17<sup>th</sup> December 2008 and 25<sup>th</sup> July 2009. Two further rounds of correspondence were sent by BNLWRP, ORF and ISS to these recipients on 18<sup>th</sup> February 2011 and 14<sup>th</sup> June 2011.
- x Correspondence sent by BNLWRP, ORF and ISS to the OPCW Director General on 21<sup>st</sup> February 2011.
- xi Correspondence received from the OPCW Legal Advisor on 2<sup>nd</sup> March 2011 (copy on file with author).
- xii Correspondence received from the OPCW Legal Advisor on 2<sup>nd</sup> March 2011 (copy on file with author).
- xiii Under CWC Article 7.1 *"Each State Party shall, in accordance with its constitutional processes, adopt the necessary measures to implement its obligations under this Convention. In particular, it shall:*  
(a). *Prohibit natural and legal persons anywhere on its territory or in any other place under its jurisdiction as recognized by international law from undertaking any activity prohibited to a State Party under this Convention, including enacting penal legislation with respect to such activity;"*
- xiv For example: Chayes, A. and Meselson, M. Proposed Guidelines on the Status of Riot Control Agents and Other Toxic Chemicals Under the Chemical Weapons Convention, Chemical Weapons Convention Bulletin, Volume 35, March 1997.
- xv OPCW, Chemical Weapons Convention, Article 2.1(a)
- xvi OPCW, Chemical Weapons Convention, Article 1.5
- xvii However, in recent correspondence with BNLWRP, ORF and ISS, the Turkish Government has stated its position regarding the prohibited nature of *"mortar ammunition containing tear gas"* and has detailed its destruction of all remaining 120mm mortar munitions containing CS as well its attempts to halt the trade, promotion and brokering of such munitions. The implications for CWC States Party of Turkey's very welcome actions are explored in detail in a document prepared by BNLWRP, ORF and ISS entitled: *Destruction by Turkey of all remaining 120mm mortar munitions containing CS – A briefing note for CWC States Parties, September 2011.*
- xviii Hatch Rosenberg, B. (2003) Riot Control Agents and the Chemical Weapons Convention, Open Forum on Challenges to the Chemical Weapons Ban, Federation of American Scientists Working Group on Biological and Chemical Weapons, The Hague, Netherlands, 1<sup>st</sup> May 2003, <http://www.fas.org/bwc/papers/rca.pdf>
- xix Crowley, M. Dangerous Ambiguities: Regulation of Riot Control Agents and Incapacitants under the Chemical Weapons Convention, Bradford Non-Lethal Weapons Research Project, University of Bradford, October 2009, pp.108-109
- xx See for example: Schneidmiller, C. Danger of "Nonlethal" Agents Grows Amid States' Inaction, Report Says, Global Security Newswire, 6<sup>th</sup> November 2009, [http://gsn.nti.org/gsn/nw\\_20091106\\_8443.php](http://gsn.nti.org/gsn/nw_20091106_8443.php); Crowley, M. Toxic traps - weaknesses of the chemical control regime, Janes Intelligence Review, December-January 2009.
- xxi Crowley, M. Dangerous Ambiguities: Regulation of Riot Control Agents and Incapacitants under the Chemical Weapons Convention, Bradford Non-Lethal Weapons Research Project, University of Bradford, October 2009, pp.107-108, <http://www.brad.ac.uk/acad/nlw/publications/BNLWRPDangerous1.pdf>
- xxii See for example: Schneidmiller, C. Danger of "Nonlethal" Agents Grows Amid States' Inaction, Report Says, Global Security Newswire, 6<sup>th</sup> November 2009, [http://gsn.nti.org/gsn/nw\\_20091106\\_8443.php](http://gsn.nti.org/gsn/nw_20091106_8443.php); Crowley, M. Toxic traps - weaknesses of the chemical control regime, Janes Intelligence Review, December January 2009/10.
- xxiii Crowley M. Dangerous Ambiguities: Regulation of incapacitants and riot control agents under the Chemical Weapons Convention, 2<sup>nd</sup> December 2009, Open Forum, CSP-14, OPCW, The Hague, Netherlands [http://www.opcw.org/fileadmin/OPCW/CSP/C-14/open-forum/Dangerous-Ambiguities\\_Regulation-of-Riot-Control-Agents-and-Incapacitants-under-the-Chemical-Weapons\\_Convention\\_Rev.1.pdf](http://www.opcw.org/fileadmin/OPCW/CSP/C-14/open-forum/Dangerous-Ambiguities_Regulation-of-Riot-Control-Agents-and-Incapacitants-under-the-Chemical-Weapons_Convention_Rev.1.pdf)
- xxiv Crowley, M. (2010) *Op.cit*
- xxv See in particular: *Destruction by Turkey of all remaining 120mm mortar munitions containing CS – A briefing note for CWC States Parties, September 2011, BNLWRP, ORF and ISS.* This briefing has been circulated to the Permanent OPCW Representatives of all CWC States Parties and is available on the websites of the three organisations.
- xxvi Correspondence dated 7<sup>th</sup> July 2011, received from Ambassador Goosen (copy on file with author).
- xxvii Correspondence dated 22<sup>nd</sup> July 2011, received from Ambassador Goosen (copy on file with author).