

## Russia's chemical weapons programme

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Russia's declared stockpile of tens of thousands of tons of chemical weapons are stored in seven sites across the country. According to Chemical Weapons Convention, Russia has to fulfill the major task of destroying its huge stockpile by 2012. To help Russia to eliminate its stockpiles of chemical weapons under the CWC many other countries have also come forward with their financial assistance. At present Russia doesn't have any intention to retain parts of its chemical arsenal for the military purpose, hence, if any delay occurs in the chemical weapons destruction process beyond 2012 will be mainly due to serious technical, environmental, financial and political reasons.

After the disintegration of the Soviet Union, the Russian Federation became the home of the former Soviet stockpile of chemical weapons consisting of (declared) stockpile of nearly 40,000 metric tons (mt.) of chemical nerve, blister and choking agents. Russia's declared stockpile of tens of thousands of tons of chemical weapons are stored in seven sites across the country. These are mainly in Kambarka, Gorny, Kizner, Maradikovsky, Lionidovka, Shchuche and Pochep. Out of these seven main locations, five locations, like Shchuchye, Kizner, Pochep, Leonidovka and Maradykovsky nerve agents are stored. The Shchuchye facility also stores Phosgene. The other sites, like Kambarka and Gorny mainly stores blister agents. The chemical weapons stored at each of these sites are controlled by the branch of military services. For example the Pochep, Leonidovka and Maradykovsky are the Air Force-controlled installations and contain mainly air-delivered weapons. The storage locations in Kizner and Shchuchye are under the command of the Russian ground forces and contain primarily rocket and tube artillery warheads/projectiles. The Chemical and Biological Forces controls Gorny and Kambarka site, which mainly stores blister agents in bulk containers.<sup>1</sup> The program to destroy Russian Federation's chemical weapons stockpile is facing many difficulties as stockpiles are very large and are stored in multiple locations as well as are comprised of a considerable variety of munitions and agent types and monition-agent combinations.<sup>2</sup>

According to Chemical Weapons Convention, Russia has to fulfill the major task of destroying its huge stockpile by 2012. For implementing this chemical demilitarisation programme, Russia is facing many political, economical, environmental as well as social challenges.

**Fig I**

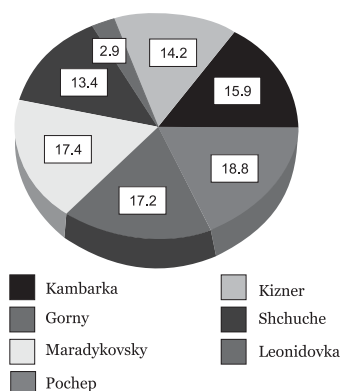
**Map showing the Chemical Weapons storage sites in Russia**



Source: [http://www.washingtonpost.com/wpsrv/inatl/longterm/coldwar/maps/russia1\\_map.htm](http://www.washingtonpost.com/wpsrv/inatl/longterm/coldwar/maps/russia1_map.htm)

**Fig II**

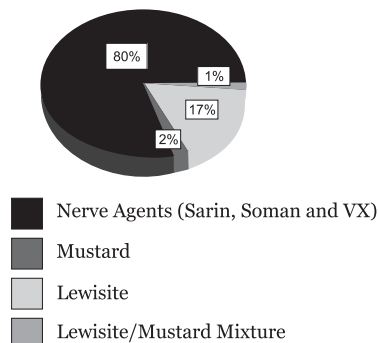
**Chemical Weapons Stored in Russia**  
% of Stockpile at Each Site



Source: <http://www.fas.org/nuke/guide/russia/cbw/cw.htm>

**Fig III**

**Chemical Agents in the Russian Stockpile**  
40,000 Metric Tons Total



Source: <http://www.fas.org/nuke/guide/russia/cbw/cw.htm>

## Brief History

Chemical weapons in Russia are as old as machine guns in the army of Russia. Inherited from the Czarist army, they continued to serve in Soviet Russia even after 1918. During the Soviet period the work on developing, producing, stockpiling and using chemical weapons was the occupation of an entire sector for organising the army, industry and medicine, that had evolved into a stable and closed military-chemical complex (MCC).<sup>3</sup>

During World War II, production of all types of chemical agents in Russia increased drastically. Yperite<sup>4</sup> was produced by 30 plants with a total capacity of 35,000 tons/year and Lewisite<sup>5</sup> was produced by 13 plants. The industrial production of sarin<sup>6</sup> started in 1958-1959, in 1967, the production of soman<sup>7</sup> started and in 1972 industrial production of V-gas<sup>8</sup> began. In the early 1980's, special storage facilities were built at industrial sites in Volgograd, Novocheboksarsk, Zaporozhye, Pavlodar, Volsk and in number of other cities.<sup>9</sup>

The production of chemical weapons discontinued in Russia in the early 1990's. Russia signed the Chemical Weapons Convention (CWC) on January 13, 1993, entered into force on April 29, 1997 and ratified it on November 5, 1997.<sup>10</sup> The ratification of chemical weapons also made Russia realise that it cannot continue the legacy of Soviet Chemical Weapons development programme. Russia officially stated its commitment to destroy and not to replace its declared Chemical Weapons Stocks in the mid of 1990.<sup>11</sup>

## Disarmament Agenda

Russia committed itself for the destruction of its chemical weapons and to meet these objectives, the major priorities for Russia are to develop the social infrastructure in the

areas surrounding the destruction facilities, to ensure that the destruction process is conducted safely and protect the local environment. Decree No. 305 and the law that was adopted on November 5, 1997, for ratifying the Chemical Weapons Convention, demonstrates, Russian Federation's firm commitment, towards destroying, its stockpile of chemical weapons. Russian government has also allocated separate funds to support the program and designated government officials and agencies for achieving this goal.<sup>12</sup>

## Methods Employed

As per Russian Federation's Decree No. 305, (introduced on March 21, 1996), Russian chemical weapons destruction program follows the following objectives:

- The stockpile should be destroyed in accordance with the Chemical Weapons Convention.
- There is a need to improve the ecological conditions of the areas surrounding chemical weapons storage and destruction sites.
- Mitigate concerns about those living in close proximity to the storage locations.<sup>13</sup>

## International Support

Though Russia has substantially increased its own funding for Chemical Weapons destruction programme, but it has also stressed the importance of foreign assistance to accelerate the implementation of this programme. To help Russia to eliminate its stockpiles of chemical weapons under the CWC many other countries have also come forward with their financial assistance. With the assistance of Germany, EU, Netherlands, Finland and Poland, two chemical weapons destruction facilities have been built as well as the facility at Gorny has destroyed all chemical weapons stored there from 2002-

2005. The facility at Kambarka was built with the assistance of Germany, Netherlands, Switzerland, Sweden, and Finland and became operational by the end of December 2005. With the assistance of US, UK, Italy, Switzerland, Czech Republic, Norway, Netherlands, Sweden, New Zealand, Ireland and Belgium the construction work for the chemical weapons destruction complex at Shchuchye has already started. This facility is scheduled to become operational from 2008. France, after ratification of the bilateral agreement with Russia, on February 14, 2006, has also started funding the chemical weapons destruction process in Russia. Italy has also provided assistance for the construction of the chemical weapons destruction facility at Pochep.<sup>14</sup> Germany has also assisted in the construction of the facility in Leonidovka. UK has provided assistance for the facility at Kizner. Netherlands, UK, Finland and Switzerland have decided to fund public outreach centers in the vicinity of some facilities.<sup>15</sup>

**Fig.IV**

### Chemical Weapons destruction complex



Source: [http://www.parsons.com/about/press\\_rm/potm/05-2002/index.html](http://www.parsons.com/about/press_rm/potm/05-2002/index.html)

According to the Canadian government, Canada has contributed 100 million Canadian dollars (C\$) for chemical weapons destruction facility at Kizner.<sup>16</sup> Canada has also contributed more than C\$100 million for the large quantities of chemical weapons

destruction facility at Shchuchye. This amount includes C\$55 million for procuring equipments for the chemical weapons destruction facility, C\$33 million for the construction of railways for transporting the munitions from the storage to destruction site and C\$15 million for supporting the key infrastructure projects. The additional C\$100 million will be used to complete work at Shchuchye and also to support construction of the chemical weapons destruction facility at Kizner. Here the destruction of nearly 5,700 tones of nerve agents (stored in approximately 2 million artillery shells and munitions) will also be undertaken.<sup>17</sup> Such contributions will greatly supplement Russia's efforts for chemical disarmament, which will also in a way help in the complete elimination of chemical weapons from the world.

## Current Status & Future Scenario

Russia claims that it has already destroyed around 20 per cent of its chemical weapons stockpile by the end of 2007.<sup>18</sup> According to the schedule submitted to Organisation for the Prohibition of Chemical Weapons (OPCW), Russia is set to build in 2008 its third destruction plant in the Western Siberian Kurgan Region, which borders Kazakhstan. Further, Moscow expects to eliminate around 45 percent of its chemical weapons stockpile by December 2009 and 100 per cent by April 29, 2012 at the estimated costs of around \$7 billion. A new plant that can safely destroy all chemical arms in Russia is being built in the town of Pochep located in southwest of Moscow.<sup>19</sup>

At present Russia doesn't have any intention to retain parts of its chemical arsenal for the military purpose, hence, if any delay occurs in the chemical weapons destruction process beyond 2012 will be mainly due to serious technical, environmental, financial and political reasons. However, a failure to finish the task within the deadline of 2012 might have serious

legal as well as political ramifications for the country. The OPCW inspectors will continue to monitor the storage and destruction facilities in Russia to make sure that the deadline of April 2012 can be met and also to make sure that all the weapons are destroyed in a manner which will fully protect the environment and workers involved in such activity. The OPCW workers will also see that Russia must not use any short-cut neutralisation or incineration techniques that fail to destroy chemical warfare agents in a safe, complete and irreversible manner. Further, OPCW inspectors will also ensure that Russia must continue to comply with the stringent pollution controls and safety precautions including emergency preparedness and evacuation planning and be transparent in its activities including stakeholder's involvement.<sup>20</sup>

The executive members of the CWC have also decided to send its delegation by early 2008 to all the chemical weapons destruction sites in Russia, as well as to Moscow mainly to seek political assurance from the Kremlin that everything possible will be done by the Russian government to meet the deadline of 2012.<sup>21</sup> This will also help the council to obtain a clear picture of progress in destruction activities and find out if at all Russia will require extending the deadline. They will also have factual basis in front of them for an eventual decision on how to respond to various difficulties and challenges that Russia is facing to complete this programme.

## End Notes

- 1 David Hoffman, Washington Post Foreign Service, August 16, 1998; Page A1
- 2 Lev Fedorov, "We Were Preparing for an All-Out Chemical War", Obshaya Gazeta, January 26, 1995.
- 3 Pikalov, V. K., ed., "Khimicheskiye Voyska Sovetskoy Armii" *Voyennoye Izdatelstvo*, Moscow, 1987, pp.76
- 4 Yperite is PTC of skin-blistering and general toxic action. This is Oily brown liquid and poorly hydrolyzed.
- 5 Lewisite is Organoarsenic PTC of skin-blistering action. This liquid is concentration of 0.12 mg/liter causes death upon action through respiratory organs.
- 6 Sarin is Colorless liquid. Mixes readily with water. Slowly hydrolyzed by water.
- 7 Soman is Colorless liquid. Causes general poison in action on the skin in vapor state. Very slowly hydrolyzed by water.
- 8 V-gas is Oily high-boiling liquid. Readily soluble in water. Freezes at very low temperatures. Penetrates into the organism through the skin and respiratory tract. Slowly hydrolyzed by water.
- 9 <http://www.fas.org/nuke/guide/russia/cbw/cw.htm>
- 10 John Hart & Cynthia D. Miller eds. *Chemical Weapons Destruction in Russia: Political, Legal and Technical Aspects*, Oxford University Press, 1998, pp.161.
- 11 "Russian Cabinet OK's Destruction Plan," Associated Press, June 14, 2001.
- 12 "Russian Government Approves Revised Chemical Weapons Destruction Programme", UN Press Release DC 2781, June 18, 2001.
- 13 Robert F. Dundervill, Jr. Peter F. Gerity, Anthony K. Hyder and Lawrence H. Luessen, Eds. *Defence Conversion Strategies*, Kluwer Academic Publisher, London, pp. 473-475.
- 14 Italy has committed up to 360 million euros from 2004 to 2008 for the construction of the facility.
- 15 G8 global partnership report, Summit 2006, St. Petersburg, July 16, 2006.