



CONCEPT PAPER

OSCE-NATO TECHNICAL WORKSHOP ON ROCKET FUEL COMPONENT (MELANGE) DISPOSAL (Kyiv, Ukraine, 6-8 July 2005)

Background

In the Soviet Union two component liquid propellants were used for larger rockets and guided missiles. These two components were a high energetic fuel and an oxidizer referred to as Melange. Prior to a launching both components had to be filled into separate internal containers of the missile. Ignition was initiated by jetting the two components into the missile combustion chamber. Both components were separately stored in special containers at field unit level to enable immediate filling of the missiles in case of alert and at depot level for re-supplying the field units. Non fired missiles had to be removed from the field, emptied, cleaned, and both the fuel and the oxidizer had to be returned to the appropriate containers.

Melange by itself is a highly complex chemical substance, whose components are extremely active, easily evaporating and highly toxic. In the event of disaster it will prove hazardous to health and the environment, with negative consequences in both respects.

As a result of the collapse of the Soviet Union, there are large quantities of Melange storages left on the territory of the former republics of the USSR. Due to the lengthy period of storage of Melange in these areas, a lot of water has appeared and as a result of shrinkage and corrosion, the effectiveness of the inhibitor might have decreased by 50-60%, thus leading to the destabilization and active decomposition of the Melange itself that, in turn, could no longer be utilizable as such.

Many of the OSCE/NATO partner countries cannot solve this problem alone due to the lack of necessary technical, material and financial resources. Therefore, international assistance is urgently needed. Several states requested such assistance from the OSCE and NATO (Georgia, Armenia, Ukraine, Uzbekistan, Azerbaijan, Kazakhstan), and more states can do so in the near future.

The OSCE Document on Stockpiles of Conventional Ammunition states that “the participating States recognize the security and safety risks posed by the presence of stockpiles of conventional ammunition, explosive material and detonating devices in surplus and/or awaiting destruction in some OSCE/NATO partner countries. These risks may adversely affect the local population and the environment and, through the possibility of illicit trafficking and uncontrolled spread, especially to terrorists and other criminal groups, the security of the OSCE participating States”.



The OSCE Strategy Document for The Economic and Environmental Dimension states that “the protection of the environment is a high priority for all our States. In the light of the growing impact of environmental factors on the prosperity, stability and security of our States and the health of our populations, we encourage dialogue and the exchange of information, *inter alia*, on best practices, on a voluntary basis, on environmental issues of importance for participating States, including on environmentally sound technology”.

In the last three years the OSCE and NATO have accumulated significant practical experience in the field implementing Melange projects. In 2002, the “OSCE Project Melange” in Georgia was successfully finalized. The stock of approximately 450 tons of “Melange” has been disposed of. Through neutralization with milk of lime, the missile fuel was transformed into harmless and agriculturally useful saltpetre fertilizer. At present the OSCE Centre in Yerevan is applying upgraded Georgian model in Armenia to neutralize 882 tons of Melange. In 2004, Phase I - Scoping Study and preparatory phase were successfully completed in Armenia, and presently the OSCE Centre in Yerevan is implementing project Phase II - Planning, Contracting and Budgeting.

The OSCE Centre in Tashkent is planning to conduct a Phase I – Scoping Study in Uzbekistan later this year.

In the year 2002 NATO-NAMSA have successfully completed the destruction of 350 tonnes of mélange in Moldova through incineration.

NATO’s future involvement consists of is a project for the construction of a mobile disposal facility and, at the same time, a survey of industrial mélange conversion capabilities including cost estimates. This project will be carried out jointly by the NATO Public Diplomacy Division (Security through Science Programme) and the NATO Maintenance Supply Agency (NAMSA). A competitive solicitation for the construction of the mobile plan has been launched to the NATO member nations. The responses to the NAMSA Request for Proposals will provide for the first time a clear understanding of the industrial response to the mélange disposal requirement and, where appropriate, known fixed prices based on varying budgetary options.

A “Melange board” consisting of international experts, military and technical experts from NATO countries and countries affected by Melange will monitor this whole project of setting up and running the mobile Melange disposal plant.

Way forward

In order to provide a framework for a comprehensive, most cost-effective and ecologically sound response to the Melange problem in a wider OSCE/NATO partner countries area, it is agreed that the OSCE and NATO jointly organize a three-day workshop on 6-8 July 2005 in Kyiv, Ukraine.



During the Workshop the participants from affected OSCE/NATO partner countries and international experts will present national problems, international experience, lessons learned and exchange views on the best possible way forward in developing Melange projects.

The workshop could also lead to:

- Providing in-depth overview and identification of the best methodology and technical options for secure, economically efficient and environmentally sound mélange disposal projects,
- Outlining legal and managerial aspects of mélange project implementation as well as practical lessons learned,
- Working out “Comprehensive Melange Programme” for countries requesting assistance, and
- Setting up a framework for co-operation between OSCE and NATO in implementing such a Program.

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