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Development technical equipment of the Czech Armed Forces Chemical Corps

Introduction

The Czech Armed Forces (CAF) Chemical Corps (CCs) gained their appreciation based on a lot of successes within fulfillment of tasks not only in foreign missions but also on the Czech Republic (CR) territory. Modern history of the CAF CCs is primarily connected with their units' deployment in operations in the Persian Gulf at the beginning of the nineties of last century. A spectrum of fulfilled tasks is relatively wide and includes the whole scale of tasks and measurements coinciding into a category of the chemical support¹ and specific tasks of the Chemical, Biological, Radiological and Nuclear (CBRN) Defence and protection against Toxic Industrial Materials (TIM).² Realization of the thorough decontamination is an entire part of these tasks. Its aim is either decreasing contamination of people, armament, other materials and working places on the hygienically acceptable norms or removal of the individual protective equipment (IPE) and to continue in a common activity.³ Activities connected with the thorough decontamination tasks fulfillment are much diversified. Many of them require employment of special prepared personnel and employment of specialized technical equipment which has been modernized on a CAF level in the current time.

Fulfillment of decontamination tasks, however, very closely related to the actual radiation, chemical and biological situation (RCHBS). Its assessment and permanent observation must be linked to a wide range of technical devices that already did not often meet the basic requirements for compatibility and interoperability not only within the North Atlantic Treaty Organization (hereinafter "NATO", Alliance) and European Union (EU). Aware of the fact that RCHBS monitoring must be a continuous or periodic activities, whose purpose is to obtain information about the presence (or even amounts) of chemical, biological or radioactive substances, it should be noted that the requirements for timely and quality information falling within nuclear explosions monitoring, areas of chemical weapons use, radioactive (chemical) accidents, radiological, biological and chemical reconnaissance and dosimetric and chemical controls will always be in the forefront of commanders, staffs and operation centers. On this basis it will be possible to take appropriate decisions to protect affecting personnel deployed forces and means and to take effective measures to reduce the effects of contamination.

¹ Vševojsk-2-6. Chemické zabezpečení v Armádě České republiky. 1. vyd. Praha: Ministerstvo obrany, 2008. 109 s.

² Vševojsk-2-1. Ochrana vojsk proti zbraním hromadného ničení. 1. vyd. Praha: Ministerstvo obrany, 2009. 197 s.

³ Všeob-Ř-1. Polní řád pozemních sil Armády České republiky. 1. vyd. Praha: Ministerstvo obrany, 1997. 192 s.

Introduced new technical means of decontamination and CBRN Monitoring are usable even beyond the CAF. They are supposed to be used for solution extraordinary situations in the framework of Integrated Rescue System activities. The aim of this paper is to introduce possibilities of these means which provide and to form an imagination about their employment within solution of extraordinary events connected with leakage of TIM or within weapons of mass destruction (WMD) usage.

New technical equipment of the CAF CCs

A concept of technical means and equipment of the CAF CCs development is currently focused on the use of new technologies and procedures that will lead to increase opportunities of the CAF CCs units and formations in the tasks of chemical support of the CAF in the implementation of combat support of operations conducted both on the Czech Republic territory and within operations carried out in NATO and the EU.

Among the newly implemented technical means and equipment of the CAF CCs belong:

- for mass decontamination of vehicles - **LINKA-08 Equipment for Decontamination of Military Vehicles** (introduced in 2013);
- for the implementation of small-scale decontamination vehicles and persons - **MDA Small Decontamination Vehicle** (established in 2014);
- for the personnel decontamination - **SDO Personnel Decontamination System** (implemented in 2015);
- for the monitoring RCHBS - **LAV-CBRN Light Armoured Reconnaissance Vehicle** (introduced in 2014) and **Reconnaissance Vehicle Land Rover RCHM** (introduced in 2017).

LINKA-08 Equipment for Decontamination of Military Vehicles

The basic concept and philosophy of the **LINKA-08 Equipment for Decontamination of Military Vehicles** (hereinafter "Equipment LINKA-08") development was based on the concept of mass decontamination vehicles with the continual process using high pressure coarse cleaning and final rinse of outer surfaces of passing technique via a high-pressure washing of the frame and increase the effectiveness of decontamination mixtures during their deposition in the form of liquid and foam by means of spraying frame. This method of decontamination is warranted as the removal of consequences of the not only use of weapons of mass destruction but also in a major accident or deliberate destruction of infrastructure equipment associated with the TIM release into the environment in a quantity that may endanger the lives of the population and armed forces.

Equipment LINKA-08^{4,5} is transported in an ISO 1C container. The shipping container is installed and supported with washing equipment MZ-08, spray frame POR-08 and other necessary equipment. Equipment LINKA-08 is designated for

⁴ Příručka pro obsluhu a údržbu Zařízení pro dekontaminaci bojové techniky LINKA-08. Nový Jičín: VOP CZ, 2013.

⁵ ŽUJA, Petr. Zařízení pro dekontaminaci bojové techniky LINKA-08. *Časopis 112*. 2014, roč. XIII, č. 10, s 18 - 21. ISSN 1213-7057.

decontamination of exterior surfaces particularly of military equipment with continuous manner of decontamination. Equipment LINKA-08 requires interaction with the ACHR-90M Decontamination Vehicle or other suitable vehicles of the CAS type for its operation.

Equipment LINKA-08 allows a two-stage decontamination process involving the injection of decontamination mixtures and final rinse of outer surface of vehicles passing through created a technological wash line. For realization of rough cleansing during a three-stage decontamination method within a continuous frame drive-through line it is necessary to use a washing device with a washing frame of the second set equipment LINKA-08. Rough cleaning nozzles connected to the aggregates SANIJET C 931 D (from the equipment of the vehicle ACHR-90M) and for low-pressure rough cleansing spray nozzles connected to the vehicle ACHR-90M or other suitable vehicles of the CAS type can be used for realization of the continuous decontamination with continuous technological stops.

Washing equipment MZ-08 is designated for high pressure rinse of the outer surfaces of vehicles after deposition of decontamination mixtures. It is able to set the time of its exposure to the high or rough cleansing before deposition of a decontamination mixture. It consists of washing frame MR-08, sets of high pressure pump ČV/MZ-08, transportation pump TOHATSU, floating pumps KATARAMO, floating suction basket, containers for water, lighting, sets for movement of vehicles controlling, controls and transmission components and other accessories. Washing frame MR-08 provides application of high pressure water through nozzles. It is designed to change of the transit profiles and the associated change in the number of active nozzles, launching, pause (interruption) and stop of the cleaning process through the control panel. The activity of washing frame is controlled by the operator via the control panel as well.

The spray frame POR-08 is designated for the decontamination mixture deposition. It is performed by spraying onto the outer surfaces of the vehicles. One or two spraying frames POR-08 can be alternatively used for deposition of decontamination mixtures depending on the nature of the decontamination intervention. In this case, the second spray frame POR-08 is used from the second set equipment LINKA-08. The spray frame POR-08 works in connection with ACHR-90M Decontamination Vehicle (or ACHR-90CO or other suitable vehicles of the CAS type). This vehicle is a source of decontamination mixture transported into the frame with the pump META of the decontamination vehicle. The kit consists of the spray frame POR-08, electrical power source, lighting, sets for controlling the movement of vehicles, controls and transmission components and other accessories. The spraying frame POR-08 is also designed to the change of the transit profiles and the associated change in the number of active nozzles. The activity of the frame is controlled by the operator via the control panel. These decontamination mixtures from the CAF CCs portfolio can be applied with the help of the spraying frame: decontamination mixture OS no 2, ODS no 4, ODS no 5 respectively deactivation and disinfection solutions in a liquid form, hypochlorite decontamination mixture as a slurry and the mixture ODS no 5 in the form of the foam. Construction and pillar of the frame MR-08 and POR-08 allows their placement in the collection bowl for capturing waste process water.

Handling with the ISO 1C dimensions container, in which different parts of equipment LINKA-08 in the transport position are located, can be performed with using

a hook loader of the container. Equipment LINKA-08 can be transported by all means of transport. Maximum device's capability of equipment LINKA-08 in the implementation of the thorough decontamination of vehicles is 50 pieces per hour. An operating crew consists of 4 people.

MDA Small Decontamination Vehicle

The basic concept of **MDA Small Decontamination Vehicle** (hereinafter "MDA vehicle") development was based on the concept of realization of a stationary manner so called "mass" decontamination of military material and persons carried by the CAF CCs' units. Moreover, it was based on a lot of experiences of these units in the tasks of decontamination of small units and purposefully created task forces within foreign missions with using the standard equipment of this type of unit. It is designed in order to carry out of certain tasks within combat military operations, as well as for a small scale associated with the TIM release into the environment in a quantity which may endanger of population's lives.

The MDA vehicle^{6,7} is a highly mobile, operating and autonomously newly operational and technical means of "small-scale" decontamination of the CAF CCs units. These units can be relocated for its use with all kinds of transportation. Its special chemical superstructure enables a thorough decontamination of a small number of people, their personal weapons, equipment and selected IPE or the realization of a thorough decontamination of the external and internal surfaces of a small number of military vehicles in the way of two-stage stationary manner. Furthermore, it can be used for heat water preparation, transportation and storage of small amounts of water, washing vehicles, high pressure water cleaning of motor vehicle chassis with steam, towing and recovery equipment, etc.

The main part of the MDA vehicle chassis forms a military version of TATRA 815 4x4, special chemical superstructure and accessories. The cabin of the vehicle is also equipped with air conditioning, filtered ventilation, radio station, GPS devices and dosimetric and chemical control devices and controls of superstructure. The cabin crew of the vehicle is equipped with the additional armor including windows that provide ballistic protection level 2 and mine protection level 2b according to NATO AEP-55 (STANAG 4569).⁸ Special chemical superstructure located in a fixed coach-built cabinet is attached on chassis of TATRA vehicle.

Special chemical superstructure of the vehicle consists of a complete decontamination system containing tanks, aggregates, equipment and accessories. This system provides a complete implementation of small-scale persons' decontamination including their personal equipment and military vehicles. A superstructure space is divided into seven sections, which have the following elements: water tank, tank on mixtures with mixing equipment, EDS mixer, diesel engine 1408 DHG ES, high aggregate KÄRCHER HDS-8/18-4, hot-water heater

⁶ Příručka pro obsluhu malého dekontaminačního automobilu MDA. Nový Jičín: VOP CZ, 2014.

⁷ ŽUJA, Petr. Moderní prostředek malokapacitní dekontaminace. *Časopis 112*. 2016, roč. XV, č. 6/2016, s. 26-28. ISSN 1213-7057.

⁸ AEP-55 Volume 1. Procedures for Evaluating the Protection Level of Armoured Vehicles - Kinetic Energy and Artillery Threat (Edition C Version 1). 1st ed. NSA: 2014. 99 p.

HYDRONIC M12 , water heater POV-2, fuel dispenser REMKO ATK-25, electric centrifugal pumps CALPEDA and EBARA, electric submersible pump EASYFLOW 300, floating motor pump FROGGY 4K, bins on components for the preparation of decontamination mixtures, ladders, decontamination tent with inflatable tubular structures, sump and bags, gang showers, surveying, lighting and identification kit and other accessories.

The hypochlorite decontamination mixture, decontamination emulsion mixture EDS, decontamination and deactivation mixture ODS no 5 and peroxide decontamination mixture PDS can be prepared with hauled decontamination components stored in reservoirs. These mixtures are applied on military vehicles surfaces through spray nozzles (outer surfaces) or a spray gun (inner surface) connected to the EDS mixer. Washing solution of liquid soap and water, concentrate of abrasive soap NEODEKONT and disinfectant MANOX is used for personnel's decontamination. Decontamination agents are on the surface of the persons' body applied by hand and the final rinse with hot water is carried out with the frame shower. In the case of injured persons' decontamination is a frame shower complemented by a handheld shower head. Decontamination of personal weapons is carried out by immersion in a suitable sump filled with decontamination mixtures namely depending on the contaminant. Persons equipped with isolation IPE of the body surface hermetic coating type are decontaminated with decontamination mixtures coating and final rinsed with the help of a frame showers of IPE. All output process water is collected into a collection van and then with the help of electric pumps pumped into the sealed collection bags.

Operational capability of the MDA vehicle for decontamination without re-filling the tanks is either 2-3 vehicles or 12 to 15 persons including their personal gear. Persons' thorough decontamination including their personal gear and thorough decontamination of military vehicles is not possible to implement simultaneously within a single decontamination intervention. The crew consists of 2 people.

SDO Personnel Decontamination System

SDO Personnel Decontamination System (hereinafter "set SDO") is designed to perform tasks of mass people decontamination or their hygienic cleansing, decontamination of selected IPE and personal weapons. Three versions of this set were gradually introduced into the CAF CCs arsenal. The first (used since 2000) and the second version (used since 2005) of the set SDO require to maintenance of their operating interoperability with ACHR-90 Decontamination Vehicle and subsequently with its modern version ACHR-90M. These vehicles are used for imports of input process water. Moreover, its aggregates SANIJET C 921 D are the source of hot water. At the second version of this kit compared to the first version new types of tents and screens were used. It permitted to perform longitudinal distribution of tent into two separate parts. Furthermore, minor technical adjustments of individual elements of the kit were made. Special accessories like stretchers, trolleys, beam track – convey or belt, medical supplies, hand showers etc. have been purchased and completed for selected for set SDO kits for injured and immobile people's decontamination. The third version of set SDO was established into the CAF CCs armament in 2015. Conceptually it was conceived only as a substitute for use of so-called. "obsolete" sets SDO. However, there are established new required elements as a communication and

registration system, a tent for registration and triage and immobile persons, shower for decontamination service, air conditioning units and others. Furthermore, there are used new types of tents with skylights, other types of electrical pumps. All sets are equipped with elements for the injured and immobile personnel decontamination. The newly established SDO set⁹ differs from previous versions mainly in that it does not require mutual interaction with the ACHR-90M Decontamination Vehicle. The water heater HB 250 is used for heating water. The import and transport of process water can be realized by using appropriate vehicle tankers. As the most appropriate means for storage and transport of the set SDO the container ISO 1C was chosen. Two vehicles TATRA T-810 can be also employed for these purposes. The newly established set SDO should gradually replace existing sets used by the CAF CCs.

Maximal capacity of the set SDO is maximally 120 persons per hour or 150 persons per hour for hygienic cleansing. The capacity of the set SDO in carrying out the decontamination of injured and immobile persons is approximately 30 persons per hour depending on the severity of the injury. Operating the set SDO consists of 12 people.

LAV-CBRN Light Armoured Reconnaissance Vehicle

The concept of **LAV-CBRN Light Armoured Reconnaissance Vehicle** (hereinafter "LAV-CBRN") development build on the experiences acquired by the CAF CCs units deployment within implementation of monitoring RCHBS. The development was also based on the requirement to achieve the maximum possible safety and protection of the crew in performing tasks of combat support operations implemented in an environment contaminated after use of WMD or accident or after the deliberate destruction of infrastructure devices associated with considerable leakage of TIM into the environment. Furthermore, among other things, it was required the establishment of a remote-controlled robotic reconnaissance system enabling conducting a survey of risk area without leaving crew from an armored vehicle.

The set LAV-CBRN¹⁰ is a device designated for performance of CBRN reconnaissance and monitoring RCHBS in operations. These activities can be carried out concurrently with the fact that the armored vehicle performs the mobile reconnaissance. A trailer can form an autonomous stationary monitoring station in terrain. The system can work independently or in the connection with the VAP-1 vehicle for controlling radiation and chemical reconnaissance. The armored vehicle LAV-CBRN provides ballistic protection of the crew at levels 3 and mine protection level 2 according to NATO AEP-55 (STANAG 4569).⁸

The set LAV-CBRN consists of the armored vehicle LAV-CBRN and a trailer P-LAV-CBRN. The trailer P-LAV-CBRN fulfils mainly logistic functions. Major parts of the armored vehicles LAV-CBRN forms chassis IVECO LMV M 65E19 WM - LONG and the container of special superstructure. A special body combined weapon station (CWS) of the RCWS (Remote Controlled Weapon Station) type consisting of

⁹ ŽUJA, Petr. Dekontaminace osob a její realizace v Armádě České republiky. In: *Sborník mezinárodní vědecké konference CBRN PROTECT 2015* (CD). Vyškov: Ústav ochrany proti zbraním hromadného ničení Univerzity obrany, 2015. 8 s. ISBN 978-80-7231-996-1.

¹⁰ Technický popis soupravy lehkého obrněného vozidla S-LOV-CBRN. Nový Jičín: VOP CZ, 2014.

observation and targeting devices, machine gun with external mounting, mod of protective smoke grenades (MPSG) system detection and indication of laser and microwave radiation are placed on the roof of the container. Controls of CWS are located in the cab of an armored vehicle.

The armored vehicle LAV-CBRN is equipped with an on-board information system and a special chemical superstructure. This superstructure is design for the purpose of the CBRN reconnaissance conducting. Crew protection against the effects of toxic and radioactive substances is ensured by the combined pressure relief subsystem. This system consists of pressurized filtration-ventilation device FVZ-98M (KP) and supplies equipment for harmless air.

Onboard information system (OIS) is an essential source of information for the crew. It ensures the collection, display, processing and transmission of information obtained from the OIS sensors, special chemical superstructure, combined overpressure protection subsystem and CWS. It consists of management and communication computer, commander's display unit, commander's panel associated control panel, display of irradiation and fire control, MPSG, navigation and orientation subsystem, communication subsystem, converter RS 232/Ethernet, network Ethernet switches, video observation subsystem and multi-function display device.

Special chemical superstructure fulfills the function of the sensors and OIS actuators. It provides information about the current RCHBS and their changes in time and space and provides warning against contamination by toxic and radioactive substances. Among on-board means of detection of chemical warfare agents (CWA) and toxic industrial chemicals belong to CWA Detector GID-3, Chemical Agent Monitor RAID-1M, Automatic Nerve Agent Detector GSA-12 and CWA Detector AP2C, for the detection of radioactive substances Dose rate Meter DPV-1 and for the detection of biological warfare agents and toxic industrial biological substances detector SmartBio Sensor. Meteorological sensor IRDAM 5056B and on-board weather stations unit is used for detection of the meteorological situation in the ground layer of the atmosphere. A reconnaissance robot contains Lightweight Chemical Detector LCD 3.2E, Universal Radiological Survey Meter RDS-200, swivel head with the main camera with IR or white light, rear camera, speaker, microphone and antennas. It is controlled by the operator from the cabin of the armored vehicle LAV-CBRN. Furthermore, the part of the superstructure is a device for warning the surrounding area with launchers of signal flares and airborne surveying devices batter flags designated for marking contaminated areas. Among portable devices belong to Universal Radiological Survey Meter RDS-200 and Chemical Detector CHP-5. Kit consists profitable meteorological station, profitable biological detector SmartBio Sensor, power supply modules and set parameters for evaluation of nuclear explosions are external devices for performing radiological, chemical and biological reconnaissance. The crew of set LOV-CBRN consists of 2 persons.

Reconnaissance Vehicle Land Rover RCHM

Reconnaissance Vehicle Land Rover RCHM is an upgraded version of the CBRN reconnaissance vehicle Land Rover - RCH that has been used by the CAF CCs since 2003. The reason for this modernization was the need to increase interoperability of the vehicle when it was involved in the system of the CAF command and control and

NATO Network Enabled Capabilities and Federated Mission Networking respectively. It was necessary to make adjustments to selected parts of the existing vehicle. The modernization of the vehicle was mainly focused on changing the on-board information and communication system and further increasing the capabilities of its chemical detection system.

The CBRN reconnaissance vehicle Land Rover RCHM¹¹ is a special military vehicle designated for performing radiative, chemical and meteorological observations and monitoring at the site, mobile radiation and chemical reconnaissance with occasional marking contaminated areas, pedestrian radiation, chemical and general biological reconnaissance with possible marking dangerous contaminated areas. It allows control of exposure to nuclear and chemical hazard of contamination of terrain surface, vehicles and buildings, sampling and short-term preservation of selected types of chemical and biological samples, determination of stability of the ground layer of the atmosphere after leaving the vehicle, determination of parameters of nuclear explosions, warning of near surroundings before danger of radioactive, chemical and biological contamination, automatic sorting, archiving and transmission of reports concerning detected radiation, chemical, general biological and meteorological situation.

The Land Rover Defender 130 TD 5V with a driver's cab, a box-shaped coachwork, special chemical extension and a two-axle trailer are main components of the kit. The box-shaped coachwork of the vehicle, which holds a special chemical extension and is the operator's workplace is hermetized, equipped with a filtration-ventilation device FVZ-98 and is conditioned by an air-conditioning device. The chemical extension performs the function of sensors and executive elements of the on-board information and communication system. The vehicle's chemical extension is the source of primary information to determine the radiation, chemical and meteorological situation and the location of the vehicle, the on-board information and communication system, the profitable reconnaissance module, the setting-out device and the additional equipment.

The source of primary information concerning radiation and chemical situation is the Dose Rate Meter DP-98, the air samples, Hand-held Chemical Agent Monitor RAID- M 100, Automatic Nerve Agent Detector GSA-12, Chemical Detector CHP-71 and Gas Sampling Pump Kit GASTEC GV-100. The On-Board Meteorological Kit METEO-LR is the source of meteorological information. The Navigation System DAGR (Defence Advanced GPS Receiver) is used to determine the vehicle's immediate position.

The vehicle's on-board information and communication system provides collection, displaying, processing, sending and archiving information from the vehicle's on-board information system sensors and the chemical extension. It is highly interactive and works by setting it in an automatic, semi-automatic or manual mode. It consists of an all-in-one on-board computer with an application software, information panel, a communication server, Mobile Tactical Radio DICOM RF13250E, Intercom System VICM 200 COMBAT, Signalling Panel SP-99 and Acoustic Warning Device GAVS-99.

¹¹ Návod na obsluhu a údržbu vozidla radiačního a chemického průzkumu Land Rover RCHM. Brno: VVÚ, 2017.

The profitable reconnaissance module includes Universal Radiological Survey Meter RDS-200 and Handheld Contamination Monitor MICROCONT H 13420, Dosimetric Instruments, simple chemical discovery assist kit - Detection Papers CALID-3 and Detection Strips DETEHIT, Sampling Kit POV-2000, Sample Transport Kit STV-99, Portable Meteorological Set VSA-99, the hand-set for the marking contaminated areas and Hand-held Tactical Radio DICOM RF1301.

The setting-out device is designed to marking contaminated areas in accordance with NATO standards, using special flags that contain the required current data on the detected contamination. The dock leveller is designed to release flags without having to leave the vehicle by its crew. Additional equipment allows the vehicle crew to carry out long-term on-site and off-site operations regardless of the time of day, monitoring the surroundings of the vehicle at greater distances, positioning and orientation in the vehicle, vehicle camouflage, and operational (partial) decontamination. The vehicle crew consists of 3 people.

Conclusion

Introduction of above mentioned technical means and equipment into the CAF CCs armament increased and extend the capabilities of the implementation of both CBRN Defence and chemical support in the framework of tasks of force protection and their combat support in all types of operations of the CAF, NATO and the EU. New technologies in-built in specific devices incorporated in new technical equipment fulfil all demands coming out from interoperability and compatibility requirement within the NATO and EU. Moreover, there is a huge presumption that operational and even tactical possibilities will be enhanced. These partial analysis are going to be a further part of the research.

Used literature

Used literature is listed in links under the line on each page. We respected the format send from redaction.

RESUMÉ

Nasazení a použití jednotek chemického vojska vychází z požadavků na realizaci chemického zabezpečení, na ochranu proti zbraním hromadného ničení a průmyslovým nebezpečným látkám v celém spektru činností v případě, pokud uvažujeme o vojenských operacích. Chemické vojsko Armády České republiky je určeno k plnění nejsložitějších úkolů vyplývajících z reakce na krizové situace spojené se zbraněmi hromadného ničení a úniky průmyslových nebezpečných látek. Článek se zabývá nejnovějšími technickými prostředky a zařízeními dekontaminace a monitorování úrovně radiační, chemické a biologické kontaminace, které byly v nedávné době zavedeny do výzbroje jednotek a útvarů chemického vojska Armády České republiky. Specialisté Ústavu ochrany proti zbraním hromadného ničení se podíleli na procesu vývoje, výroby, testování a zavádění uvedených prostředků do praktické činnosti vojsk.

Klíčová slova: Armáda České republiky, chemické vojsko, dekontaminace, monitorování, chemický, biologický, radiologický a jaderný, průzkum.

S U M M A R Y

Deployment of the Chemical Corps units comes out from demand of realization of the chemical support and chemical, biological, radiological and nuclear defense and toxic industrial materials in the whole spectrum of military operations. The Czech Armed Forces Chemical Corps is designated for fulfillment of the most complicated tasks coming from a reaction on crisis situation connected with the weapons of mass destruction and toxic industrial materials leakage. The paper deals with the newest technological devices of the decontamination and monitoring of chemical, biological, radiological and nuclear situation which have been established into the armament of the Czech Armed Forces Chemical Corps in the recent time. The Nuclear, biological and Chemical Defence Institute's specialists took a part within a process of development, production, testing and establishment.

Keywords: Czech Armed Forces, Chemical Corps, decontamination, monitoring, CBRN, chemical support, reconnaissance.