OIAC

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NOTE DU DIRECTEUR GENERAL

LISTE DU NOUVEAU MATERIEL D'INSPECTION ET SPECIFICATIONS REVISEES DU MATERIEL D'INSPECTION APPROUVE

1. A sa première session, la Conférence des Etats parties a adopté la liste du matériel d'inspection accompagnée des exigences opérationnelles, des spécifications techniques et des critères d'évaluation communs (C-I/DEC.71 du 23 mai 1997).

2. A la lumière de l'expérience de l'utilisation du matériel d'inspection et des améliorations apportées aux procédures appliquées lors des inspections au cours de l'année écoulée, le Secrétariat technique, conformément au paragraphe 27 de la deuxième partie de l'Annexe sur la vérification, a identifié la nécessité :

   a) d'ajouter du nouveau matériel à la liste du matériel d'inspection;

   b) de modifier les spécifications et les exigences opérationnelles en vigueur pour le matériel dont la liste figure dans le document C-I/DEC.71.

3. Pour ce faire, le Secrétariat technique a créé une équipe spéciale, présidée par le chef du Service de l'appui technique, composée de représentants des différents services de la Division de la vérification et des autres divisions du Secrétariat. L'équipe spéciale est convenue d'un certain nombre d'ajouts et de modifications, compte tenu des exigences suivantes :

   a) améliorations visant à garantir la santé et la sécurité des équipes d'inspection;

   b) améliorations de la logistique et de l'administration pendant les inspections;

   c) insertion d'instruments de surveillance installés sur place dans la liste du matériel approuvé afin de réduire les coûts de la vérification, comme expliqué dans le rapport du Directeur général relatif aux options possibles pour réduire les coûts de la vérification (EC-XI/DG.5 du 3 août 1998);

d) élaboration de procédures de l'OIAC relatives au prélèvement, à la préparation et à l'analyse des échantillons.

4. Le Directeur général communique ci-joint à la Conférence des Etats parties, pour examen, la liste des exigences opérationnelles et des spécifications techniques du nouveau matériel d'inspection proposé ainsi que des propositions de spécifications révisées pour le matériel dont la liste figure dans le document C-I/DEC.71.

Appendice (en anglais seulement) : List of new inspection equipment and revised specifications for approved inspection equipment (Liste du nouveau matériel d'inspection et spécifications révisées du matériel d'inspection approuvé)

Appendix

LIST OF NEW INSPECTION EQUIPMENT AND REVISED SPECIFICATIONS FOR APPROVED INSPECTION EQUIPMENT

The task force on new equipment discussed additions and modifications to the list of approved equipment based on the following requirements:

Section 1. Improvements to ensure the health and safety of inspection teams.
Section 2. Improvements to logistics and administration during inspections.
Section 3. On-site monitoring equipment to reduce the costs of verification.
Section 4. Revisions necessary due to the establishment of OPCW sampling, sample preparation and analysis procedures.

Section 1. Improvements to ensure the health and safety of inspection teams

It was considered that there were gaps in the list of equipment that needed to be filled in order to improve or to ensure the health and safety of inspection teams, namely:

Protection against the weather

Wet weather clothing	Attachment 4 - Item 1
Sun hat	Attachment 4 - Item 2

- At present there is no approved clothing for inspectors during wet weather or to protect their heads from the sun.

Improvements to protection against CW agents

Duct tape	Attachment 4 - Item 3
Powered air filter unit	Attachment 4 - Item 4
Mask hood	Attachment 4 - Item 7
Qualitative mask fit (banana oil)	Attachment 2 - Item 1

- Duct tape is used to seal the gap between protective gloves and the air-permeable CW protective suit overlap, to prevent the penetration of agents in liquid or vapour form.

- A powered air filter unit would provide extra protection and comfort for inspectors when wearing a protective mask. The additional comfort would reduce fatigue, enabling inspectors to work longer.

- A mask hood would give additional protection to the neck/throat when wearing a mask under a suit. It would also cover any gap between mask face piece and the hood opening.

- Isoamyl acetate, known colloquially as "banana oil", provides a portable, quick means by which an inspector can check the mask fit when a mask fit test kit is not on hand.

Improvements to safe working conditions

Miner's lamp for safety helmet	Attachment 4 - Item 6
Individual heat stress monitor - revision	Attachment 10 - Item 1
Wide area agent monitor	Attachment 4 - Item 5

- Inspectors have recommended a head-mounted (intrinsically safe) lamp that enables them to keep both hands free.

- Some changes to the individual heat stress monitor are recommended, to improve the flexibility of the equipment, which will also improve the ability of the equipment to measure more parameters.

- To warn inspectors of dangerous CW concentrations above IDLH in an area, instead of point sources when the inspected State Party cannot provide this information.

Improvements to medical equipment

Advanced treatment kit - revision	Attachment 7 - Item 1
Chemical weapons casualty Treatment kit - revision	Attachment 7 - Item 2

- These changes to the advanced treatment kit would extend the treatment capabilities of medical staff and would provide a comprehensive ability to treat medical problems on-site.

- Changes to the chemical weapons casualty treatment kit will improve the ability of the medical staff to treat CW casualties and cover the majority of potential CW injuries.

Section 2. Improvements to logistics and administration during inspections

Name change to reflect usage of equipment

General first aid kit - revision	Attachment 7 - Item 3
First aid kit personal - revision	Attachment 8 - Item 1

The changes to the general first aid kit and first aid kit are name changes only.

Communications equipment

Portable repeater station for short range radios	Attachment 5 - Item 1
Base station for short range radios	Attachment 5 - Item 2
Mobile telephone	Attachment 5 - Item 3
Acoustic coupler	Attachment 5 - Item 4
Short range radios - revision	Attachment 9 - Item 1

- A portable repeater unit would improve communications at large inspection sites and where local conditions require extra power.

- The addition of a base station would improve the logistics and administration of large inspection teams.

- The use of approved mobile telephones in some areas would reduced communications costs and add flexibility to the inspection team. In some instances, a mobile phone rather than a satellite telephone could be used for communication with OPCW headquarters.

- An acoustic coupler would allow inspection teams to connect communications equipment to local lines where access is limited to a handset only.

- The revision to the short-range radios is to include the ability for a trained and certified operator to take equipment to programme the short range radios on-site or at the POE, when information on local frequency allocations can only be provided on-site or when an inspection team is moved from one inspection site to another, with different local regulations and/or different frequency allocations.

Other improvements

Air compressor for SCBA	Attachment 3 - Item 1
Bar code reader and printer	Attachment 2 - Item 2
Thermometer (equipment & environmental)	Attachment 3 - Item 3
Photographic equipment - revision	Attachment 6 - Item 3
Computer (notebook/printer) - revisions	Attachment 8 - Item 2

- The availability of a compressor to fill SCBA bottles would improve the ability of inspectors to complete inspections where SCBA is required, and would also reduce the costs of transporting a large quantity of full SCBA bottles, which at present must be shipped as dangerous goods.

- A bar code reader and printer would aid inspections where a large number of seal serial numbers need to be recorded and entered into a computer. This equipment would reduce the potential for errors, and would speed up auditing significantly.

- The temperature of some items of equipment needs to be measured to ensure that the operating temperature is within the acceptable range for accurate results. The availability of a portable thermometer capable of measuring the internal temperature would greatly improve confidence in the results.

- The revisions to photographic equipment is requesting that advances in imaging technology do not exclude the use of digital imaging equipment. For example, when capturing of images in a contaminated area:

(a) A digital camera enclosed in a protective bag can take images of the same quality as an instant camera, and the images can be be printed on a colour printer immediately.

(b) An instant camera will be contaminated, as will any photographs taken with that cameral, because of the difficulty in placing an instant camera in a protective bag.

(c) A 35 mm camera with a protective cover could also be used to take photographs inside a contaminated area, but the film must then be developed and processed, with the associated costs and risks to confidentiality.

- Revisions to the computer (notebook/printer) are required to improve the specifications for the printer, and not to exclude the use of laser printers by limiting the weight of the notebook and printer combination, as in the C-I/DEC.71 specification (4 kg). The ability to use a laser printer on an inspection mission would improve the speed of producing reports significantly.

Section 3. On-site monitoring equipment to reduce the costs of verification

On-site monitoring equipment would reduce the costs of verification, as reported in EC-XI/DG.5 (Options for Reducing the Costs of Verification), particularly at CWDFs.

CCTV on-site monitoring equipment	Attachment 1 - Item 1
Tracking and monitoring equipment	Attachment 1 - Item 2
Flow monitor	Attachment 1 - Item 3
3-D photographic equipment	Attachment 1 - Item 4

- These four items include equipment for on-site monitoring by OPCW staff at CWDFs, and equipment to enable inspectors to track and verify remotely the security of CWC-sensitive items. Also suggested is equipment to be used to monitor flow in pipes during destruction or at production sites.

- The inclusion of the 3-D photographic system would enable inspection staff to verify the progress of dismantling of production sites, and to monitor any changes in production processes at some facilities.

Section 4. Revisions due to the establishment of OPCW sampling, sample preparation and analysis procedures

Sample collection kit - revision	Attachment 6 - Item 1
GC/MS sample preparation kit - revision	Attachment 6 - Item 2

- The contents of the revised standard sampling kit is based on the OPCW sample collection procedures for soil, aqueous and wipe samples.

- The contents of the revised GC/MS sample preparation kit is based on the OPCW sample preparation procedures for soil, aqueous and wipe samples.

Annex 1

ADDITIONAL EQUIPMENT

Attachment 1 - On-site monitoring equipment

1. CCTV on-site monitoring equipment (IR/movement activated, time lapse)
2. Tracking and Monitoring Equipment
3. Flow Monitor
4. 3-D Photographic Imaging Equipment

Attachment 2 - Occupational health equipment

1. Qualitative Mask Fit (Banana Oil)

Attachment 3 - Portable equipment

1. Air Compressor for SCBA
2. Bar Code Reader and Printer
3. Thermometer (Equipment &Environmental)

Attachment 4 - Protective and safety equipment

1. Wet Weather Clothing
2. Sun Hat
3. Duct Tape
4. Powered Air Filter Unit (Air Blower Unit)
5. Wide Area Agent Monitor
6. Miners Lamp for Safety Helmet
7. Mask Hood

Attachment 5 - Administrative equipment

1. Portable Repeater Station for Short Range Radios
2. Base Station for Short Range Radios
3. Mobile Telephone
4. Acoustic Coupler

Revisions to existing specifications and operational requirements

Attachment 6 - Portable equipment

1. Sample Collection Kit
2. Sample Preparation Kit
3. Photographic Equipment
   - (a) 35 mm Camera
   - (b) Video Camcorder with Tape player
   - (c) Instant Camera

Attachment 7 - Medical equipment

1. Advanced Treatment Kit
2. Chemical Weapons Casualty Treatment Kit
3. General First Aid Kit

Attachment 8 - Administrative equipment

1. Short Range Radios
2. Computer (Notebook/Printer)

Attachment 9 - Protective and safety equipment

1. First Aid Kit Personal

Attachment 10 - Occupational health equipment

1. Individual Heat Stress Monitor

Attachment 1

ON-SITE MONITORING EQUIPMENT

1. CCTV on-site monitoring system (*without* remote capability to OPCW HQ)

1.1 Physical features

- The On-site CCTV system consists of cameras, both interior and exterior with housings one or more CCTV monitors, Multiplexors and demultiplexors, infrared detectors, event/time lapse recorder and controls.
- Ancillary equipment is at a minimum radio frequency Cable RG-59, 75 ohm cable however/preferably fibre optic for video, control cables preferably PTZ for control and status for cameras. Fixed cabinet for equipment installation, optimally standard 19 inch/47.5 mm racks, keyboard/joystick control for camera operability (zoom, 360 turn, yaw and pitch etc.)
- The system must operate on local site voltages.
- The CCTV system station must include a battery backup charging system. This battery backup should provide for at least 8 hours of camera/record operation.
- CCTV monitor(s) should be at a minimum 9 in/22.5 mm standard black and white or better.

1.2 Operational features

- The CCTV monitoring station must be able to be operated by one person after 4 hours of instruction.
- All manuals and product descriptions shall be in English and include schematics, diagrams etc.
- The CCTV monitoring system must be capable of being operated in full chemical protective equipment.
- System should be able to be expanded with minimal engineering expense according to the needs requirements of the inspection site itself.
- System/camera control must be easy to use for OPCW inspectors to operate suggested item console with joystick for pan, tilt and zoom capability.
- System planning, installation/checkout and programme oversight should be by OPCW Direct Hire personnel.

1.3 Technical specifications

- System must be totally separate from other State Party CCTV/monitoring systems.
- Cameras must be capable of pan, tilt, and zoom with 360 degree rotation.
- Cameras should be CCD (charge coupled device type)
- Cameras should have Auto Iris, and a lens size dependent on location, lighting background etc.
- Camera Housing should be able to keep all inclement weather away from camera, such as precipitation, sun, temperature changes and wind.
- Camera housing must include a heater and fan cooling mechanism.

- Camera Housing to include special requirements such as Dust, explosive, and corrosive considerations.
- Camera and or housing should match existing environment.
- Camera housing and control mechanisms must be able to operate in a variety of weather systems to include temperatures in excess of + 50°C and –50°C.
- CCTV system must include long-term video recording/archiving capability with playback on demand. Suggested time frame is one month archiving or longer.
- System must be capable of being used in varying light conditions, i.e. near darkness medium to high direct light conditions.
- System monitoring should be utilised via video monitoring or other like scheme. Clarity of the video image should be at least 560 scan lines per second or better.
- System with multiple cameras should be installed correctly minus any ground fault loops or other video transmission clarity problems.

2. Tracking and monitoring system

2.1 Purpose

- To remotely monitor the location, movement and status of CWC related items or locations.
- The equipment will be required to log events in memory for transmission either to a local collection point or via satellite to OPCW headquarters.

2.2 Physical features

- Must be light in weight.
- Easily installed.
- Must be resistant to and unaffected by corrosive chemicals.
- The equipment and any modules should be protected against the environment and unaffected by extreme conditions.

2.3 Operational features

- Must have a battery backup operational mode.
- Must operate from a wide variety of power supplies.
- Must operate in a continuous or programmed interval mode.
- Must support encrypted data transmission.
- Must be able to monitor attempted tampering .

2.4 Technical specifications

- Must report position to better than ±25 m.
- All components must be able to be securely attached without damaging sensitive equipment.
- Must support a variety of optional sensors such as:
- movement
- door entry
- tilt or shock

- vibration
- Must operate for no less than 24 hours on battery backup.
- The equipment must monitor and report if external power has been affected.

The equipment must operate in the normal range of temperatures (–20°C to +60°C) with a preference for equipment that operates over a wider range of temperatures.

3. Flow monitor

3.1 Purpose

- To detect the state of flow in pipes (On or Off).

3.2 Physical Features

- Must be light weight.
- Easily installed.
- Must be resistant to and unaffected by corrosive chemicals.
- The equipment should be protected against the environment and unaffected by extreme conditions.
- Must be able to be securely attached to the outside of the pipe and not interrupt the flow.

3.3 Operational features

- Must operate for no less than 24 hours on battery backup.
- Must operate from a wide variety of power supplies.

3.4 Technical specifications

- The equipment must monitor and report if external power has been affected.
- The equipment must operate in the normal range of temperatures (–20°C to +60°C) with a preference for equipment that operates over a wider range of temperatures.
- Data must be stored in internal memory and must include the date and time the flow started and stopped, battery condition, external power status.
- Must have adjustable sensitivity to allow for noise and low flow conditions

4. 3-D photographic equipment

4.1 Purpose

- To assess if modifications have been made to chemical facilities by making a 3-D computer model of the facility based on photographs.

4.2 Technical specifications

- Camera equipment must be robust and portable
- Software must indicate automatically if changes have been made between two sets of images taken from subsequent inspections.

Attachment 2

OCCUPATIONAL HEALTH EQUIPMENT

1. Qualitative mask fit test ("banana essence" or "banana oil")

1.1 Purpose

- To qualitatively test the "goodness of fit" of protective masks.

1.2 Operational features

- Supplied in a small vial.
- Should be able to be safely disposed.

1.3 Technical specifications

- Isoamyl acetate or similar chemical supplied in ampoules.

Attachment 3

PORTABLE EQUIPMENT

1. Compressor for SCBA air cylinders

1.1 Purpose

- To fill SCBA bottles on site.

1.2 Physical features

- The compressor unit must be portable or be able to be broken down into a small number of portable units.
- The unit must be self sufficient, using electricity in the supply of breathing quality air to SCBA bottles.
- The unit must be compatible with OPCW equipment.
-

1.3 Operational features

- Must be operable by one person after training.
- Must provide breathing quality air to SCBA cylinders.
- Have a quality control kit that provides a quantitative method of checking air quality, and a method of checking cylinder soundness.

1.4 Technical specifications

- Must be able to fill an SCBA cylinder in 30 minutes.
- Mounted on suitable frame for use in field situations.
- Have integrated breathing air purification system.
- Have pressure relief valves at all stages.
- Must be operable over a wide range of supply voltages (100-240 Volts AC, 50/60 Hz, or 12/24 Volts DC).

2. Bar code reader and printer

2.1 Purpose

- To read and print bar-codes for recording and auditing purposes.

2.2 Physical features

- Code reader and printer should be light weight.

2.3 Operational Features

- The bar-code reader should be battery powered.
- Bar-code reader should have the capability to store over 100 bar-code numbers.
- Bar-code reader should be able to operate inside a clear protective bag such as mylar.

- Printer should easily interface to laptop PC with menu driven software.
- Bar-code reader should have software to easily download to PC through a cable or IR link.

2.4 Technical specifications

- Reader should read common bar code formats including UPC, EAN, Interleaved 2 of 5, Code 93, Code 128 and Code 39.
- Reader must be able to read bar codes printed at different print densities.

3. Thermometer (equipment and environmental)

3.1 Purpose

- To measure the environmental temperature or the operating temperature of equipment

3.2 Physical features

- Light weight
- Electronic temperature measurement
- Must be able to place sensor inside electrical or mechanical equipment to assess the operating temperature.

3.3 Operational Features

- Battery operated.
- Measuring element must be separate from measuring electronics.

3.4 Technical Specifications

- Resolution of 0.1°C.
- Accuracy of at least ±0.5°C.
- Must operate for over 8 hours without changing battery.
- Range -40° to +80°C minimum.

Attachment 4

PROTECTIVE AND SAFETY EQUIPMENT

1. Wet Weather Clothing

1.1 Purpose

- To protect inspectors from rain and wind.

1.2 Physical Features

- Should consist of bib-overall or pants with braces and jacket with hood.

1.3 Operational Features

- Easily disposable.
- Should provide some resistance to corrosive chemicals.

1.4 Technical Specifications

- Vinyl impregnated or other waterproofing material.

2. Sun Hat

2.1 Operational Features

- Wide brim.
- Mildew resistant.

2.2 Technical Specifications

- Material should be canvas or Poly-cotton.

3. Duct Tape

3.1 Purpose

- To seal gloves and boots to air-permeable suits to provide extra protection against ingress of CW agents.

3.2 Technical Specifications

- Approximately 5 cm wide in rolls.
- Ethylene-vinyl acetate impregnated cloth.

4. Powered Air Filter Unit

4.1 Purpose

- To provide higher protection and comfort to wearer of protective masks.

4.2 Physical Features

- Should not increase the breathing resistance when used without motor support.
- Should be easy to wear with either a belt or supporting straps.
- The design should avoid any sharp or protruding parts that may hinder the wearer in confined spaces or endangers the integrity of a protective suit.

4.3 Operational Features

- Must be able to be decontaminated.
- The air flow must be controllable.
- Should have two filter connections.

4.4 Technical Specifications

- Must provide a constant flow of air between 80 and 140 l/min.
- Battery life must be > 6 hours.
- Filter connections must be EN 148-1.
- The noise inside the mask should not exceed 65 dBA.
- Unit must be intrinsically safe to EEX ia IIc T4 in accordance with IEC 79 Series standards or equivalent.
- Air hoses and body must resist droplets of liquid mustard for > 6 hours.

5. Wide area agent monitor

5.1 Purpose

- To provide rapid identification and response to the presence of CW agents in the air.

5.2 Physical Features

- Portable device.
- Battery powered, able to run without changing battery for at least 6 hours.

5.3 Operational Features

- Should identify nerve, blood and blister agents including Lewisite within an appropriate time and independently from an operator.
- Should have individual alarm devices worn by inspectors working near the unit.

5.4 Technical Specifications

- Detection sensitivity below IDLH
- Alarm Response for low concentrations < 10 seconds
- Individual alarms should work within a radius of 1000 m.
- Should be able to recognise interferents.

6. Miner's Lamp

6.1 Purpose

- To provide head worn illumination in places where explosive mixtures of gases or vapours may exist.

6.2 Physical Features

- Long life battery, may be rechargeable.
- Fitting for attachment to safety helmet or head band.

6.3 Operational Features

- Supplied as a separate lamp and battery pack.

6.4 Technical Specifications

- Must be intrinsically safe.
- must be suitable for operation in Class II C Explosion Group areas in accordance with IEC 79 Series standards or equivalent.
- Must have a light intensity of >100 lux at 3 metres.

7. Mask Hood

7.1 Purpose

- As part of the mask system provide additional head and neck protection against chemical weapons in solid, liquid, aerosol or vapour form.

7.2 Operational Features

- Must close possible gaps between the face piece of the protective mask and the hood or collar of any type of protective suit.
- Must be sufficiently comfortable not to hinder inspection activities.

7.3 Technical Specifications

- The material must fulfil the same specifications as the impermeable suit.
- The hood should close tight around the speech transmitter and the eye pieces of the mask whilst not compromising the drinking device.
- Must cover the head, neck and shoulders.

Attachment 5

ADMINISTRATIVE EQUIPMENT

1. Portable Base Station

1.1 Purpose

- To aid logistics with short-range communications at large inspection sites.
- This equipment must comply with local regulations in relation to radio communication.

1.2 Physical Features

- Must be transportable
- Ancillary equipment to include
  (a) 10 meter (minimum) transmission reception cable preferably RG-8 or RG-213
  (b) Omni directional easy mount (such as magnetic mount) Antenna.
  (c) microphone and or tone remote controller
  (d) built-in Speaker
- Must include a battery backup and charging system.
- All equipment and ancillaries must be contained in transit boxes for transportation.
- Wide range of operating voltages

1.3 Operational Features

- The radio base station must be able to be operated by one person after 3 hours of instruction.
- All menus or other display mechanisms on and or within the base station must be in English
- All manuals, operating instructions and product descriptions shall be in English and include schematics, diagrams etc.
- The base station must be capable of being operated in full chemical protective equipment.

1.4 Technical Specifications

- The radio base station must operate on a wide range of voltages, 100 - 240 Volts AC 50/60 Hz and 12 and/or 24 Volts DC
- weigh no more than 25 kilograms including carrying case and ancillary equipment
- battery backup should provide for at least 8 hours in receive mode and 2 hours transmit mode
- The radio base station must be able to operate in the VHF and UHF frequency band system (due to nature of this system two models may need to be procured VHF (160.00 to 174.00 MHz) and UHF (438.00 to 470.00 MHz).

- Radio base station must be PC programmable and compatible with existing OPCW inspector laptops, and OPCW computers.
- Radio base station must be programmable in minimum of 5 kHz steps
- Radio base station should be 4-channel minimum.
- Transmit power average continuous should be at minimum 20 watts.
- Base station must operate in 12.5, 20 and 25 kHz bandwidth with frequency FM deviation of 3.5, 2.5 and 1.5 kHz FM respectively, IRAC F3 modulation scheme.
- Modulation must be FM capable.
- Base station must operate in at least 80% duty cycle or better.
- Frequency response of the base station must be 50 Hz to 15 kHz.
- Base station should be compatible with current OPCW radio equipment and hardware.

2. Portable Repeater Station

2.1 Purpose

- To provide support for short-range radios at large inspections sites, or where local conditions require more output power.
- This equipment must comply with local regulations in relation to radio communication.

2.2 Physical Features

- must be transportable
- Ancillary equipment to include
  (a) 10 meter (minimum) transmission reception cable, preferably RG-8 or RG-213
  (b) Omni directional easy mount (such as magnetic mount) Antenna.
  (c) microphone and or tone remote controller
  (d) in built Speaker
- must include a battery backup and charging system.
- All equipment and ancillaries must be contained in transit boxes for transportation.
- Wide range of operating voltages including car/truck batteries.
- All equipment and ancillaries must be contained in transit boxes for transportation.
-

2.3 Operational Features

- The radio base station must be able to be operated by one person after 3 hours of instruction.
- All manuals, operating instructions and product descriptions shall be in English and include schematics, diagrams etc.
- The repeater station must be capable of being operated in full chemical protective equipment.

2.4 Technical specifications

- The repeater station must be able to operate in the VHF and UHF frequency band system (due to nature of this system two models may need to be procured VHF (160.00 to 174.00 MHz) and UHF (438.00 to 470.00 MHz) and be programmable in minimum of 5 kHz steps
- Station must operate in 12.5, 20 and 25 kHz bandwidth with frequency FM
- repeater station must operate on a wide range of voltages, 100 - 240 Volts AC 50/60 Hz and 12 and/or 24 Volts DC
- weigh no more than 25 kilograms including carrying case and ancillary equipment
- battery backup should provide for at least 8 hours in receive mode and 2 hours transmit mode
- repeater station must be PC programmable and completely compatible with existing OPCW inspector laptops, and OPCW computers .
- duplex operation must be provided for in transmit and receive frequencies with minimum capability of at least 500 kHz separation for VHF and 5 MHz separation for UHF.
- transmit power average continuous should be at minimum 20 Watts, maximum 40 Watts adjustable.
- deviation of 3.5, 2.5 and 1.5 kHz FM, respectively, IRAC F3 modulation scheme.
- Modulation must be FM capable.
- Repeater station must be capable of being operated in local mode with local microphone.
- repeater station should be compatible with current OPCW radio equipment and hardware.
- System must be capable of carrier squelch, tone private line and digital private line audio sub-carrier modes.
- Tail squelch elimination must be adjustable, nominal 1 second to 3 minutes.

3. Mobile Phone

3.1 Purpose

- to enable communications between inspection team and headquarters and between members of the inspection team. This equipment could be used where local regulations or logistics prohibit the use of short-range Radios or Satellite communications.
- this equipment must comply with local regulations in relation to radio communication.

3.2 Physical Features

- the telephone apparatus must be of 'pocket' size and portable. (maximum weight of 250 g).
- the mobile phone must be provided with power supply, car adapter and carrying case.

- the antenna should be no longer than three cm.
- microphone, speaker, dialling pad, antenna and LCD screen display shall be integrated.

3.3 Operational Features

- all features must be menu driven.
- must have adjustable tone and volume ringer.
- must have a 'Do Not Disturb – silent alert' capability.
- must have a one-touch speed dialling and must store as a minimum the last 10 dialled numbers.
- must have phone security lock, SIM card security lock and a keypad lock features.

3.4 Technical Specifications

- the mobile phone must comply with European GSM telephony standards and requirements (Note: Preference should be given to a GSM mobile phone capable of operations in Europe and America).
- must be capable of storing at least 200 names and telephone numbers and be capable of limiting the calls to only those stored in the memory to prevent unauthorised communication.
- must be capable of sending and receiving messages using the keypad.
- LCD screen must have at least a 4 line information display.
- must be powered by a 'slim' NiMH battery and be rechargeable within one hour.
- must be capable of at least 21 hours of standby and/or a minimum of 100 minutes talk time.

4. Acoustic coupler

4.1 Purpose

- to connect communications equipment to telephone handset

4.2 Physical Features

- Self-contained (battery) power supply
- compact/robust

4.3 Operational Features

- Must be supplied with an adjustable securing strap
- must include a variety of international telephone connectors.

4.4 Technical Specifications

- Must connects to equipment with an RJ-11 connector
- Transfer speed up to 24 Kbps
- Must be capable of operation in conjunction with the Motorola Sectel 9600 in secure mode.

Attachment 6

PORTABLE EQUIPMENT

1. Sample Collection Kit (C-I/DEC.71, Portable Equipment, Item 27 - Attachments 5, 12, 21)

1.1 The contents of the revised Standard Sampling Kit is based on the OPCW sample collection procedures for soil, aqueous and wipe samples. Each kit comprises items sufficient for the collection of a maximum of eight soil, liquid, aqueous, wipe and air samples. If a larger number of samples of a single type is expected to be taken, the contents of the kit must be modified accordingly. All items in direct contact with the samples are included in appropriate packaging and certified pre-cleaned and/or sterilised for analytical use. The purity of chemicals are certified. All items are packaged in suitable sealed shipping containers.

1.2 The kit should also allow the sampling of other materials and bulk samples. This list of items should be regarded as indicative only. Improvements in OPCW procedures may lead to revisions in the contents of the kit.

1.3 The changes to the previous version (C-I/DEC.71 Attachments 5, 12 and 21) are marked with revision marks.

List of Equipment Items and Specifications for the Standard Sampling Kit

Item	Solid ~~Bulk~~ Sample	Liquid ~~Bulk~~ Sample	Wipe Sample	Sample Splitting	~~Other Matl. Sample~~	~~Water Sample~~	~~Soil Sample~~	Vapour/ Aerosol Sample	~~Total Items~~ Minimum Number
Bottles - glass, clear, wide mouthed, with Teflon lined screw caps, 25 ml	x				x				8
Bottles - glass, clear, wide mouthed, with Teflon lined screw caps,100 ml			x		x				8
Bottles - glass, clear, wide mouthed, with Teflon lined screw caps, 250 ml	**x**				x		x		8
Bottles -glass, narrow mouthed, clear, Teflon lined screw caps,10 ml		x							8
Bottles - glass, narrow mouthed, clear, Teflon lined screw caps. 250 ml		**x**				x			8
Vacutainer Set including : Evacuated glass container (Vacutainer) 10 ml; Vacutainer double sided syringe needle 18G x $1^1/_2$" one sharp and one blunt side; Vacutainer needle safety holder; PTFE tubing 1.07 x 1.67 mm cut to 5m length; weight, Teflon coated, 20-30g; Tie down strip, plastic		**x**							**10**
Evacuated glass container (Vacutainer) 10 ml		x							10
~~Needle 20 G~~		~~x~~							10

Item	Solid ~~Bulk~~ Sample	Liquid ~~Bulk~~ Sample	Wipe Sample	Sample Splitting	~~Other Matl. Sample~~	~~Water Sample~~	~~Soil Sample~~	Vapour/ Aerosol Sample	~~Total Items~~ Minimum Number
~~Needle safety holder~~		~~*~~							10
~~PTFE tubing 16 G~~		~~*~~				x			50 m
Weights for tubing, Teflon coated , ~~25~~ **20-30**g		x				x			10
Water Sample Collection Set including: Syringes, ~~glass~~ **polypropylene, 60 ml** ~~100 ml~~ **with Luer lock connector; Stopcock, Luerlock; Needle, Luer, with square cut or domed tip, compatible with 0.1"ID TFE tubing; TFE tubing 1/8"OD, 0.1"ID cut to 5m length; weight for tubing, Teflon coated, 20-30g; Tie down strip, plastic, 5cm**		x				x			8
Stopcock, Luerlock, [2] ~~compatible with 10 G tubing~~		x				x			8
~~P~~TFE tubing **1/8"OD, 0.1"ID** ~~10 G~~		**x**				x			**20** ~~50~~ m
On-site sample transport container-stainless steel, air tight, with absorbent, compatible with OPCW seals	x	x	x		x	x	x	x	**2** ~~1~~
Test paper packages (chemical agent detection)	**x**	**x**	**x**						1 pkg
~~pH (1-14) paper~~									~~1 pkg~~
Spatula - stainless steel, **different sizes**	x				x		x		10
Scoop/trowel, stainless steel, **small size** ~~20 cm blade~~	**x**				x		x		3
Aluminium foil - 30 cm wide				**x**	~~*~~				1 roll
~~Mylar bags, heat sealable, 20x30 cm~~					x			x	~~65~~
~~Heat sealer, battery operated, capable of sealing 40 cm sheet~~					x			x	~~2*~~
~~Pre-extracted cotton cloth, 10 cm sq.~~			~~*~~						~~10~~

Item	Solid ~~Bulk~~ Sample	Liquid ~~Bulk~~ Sample	Wipe Sample	Sample Splitting	~~Other Matl. Sample~~	~~Water Sample~~	~~Soil Sample~~	Vapour/ Aerosol Sample	~~Total Items~~ Minimum Number
Haemostat (artery clamp) 20 cm			x						5
~~Locking, telescopic, extension~~			~~x~~						~~1~~
Alligator clip to fit onto extension			x						5
Pump, battery operated, 2 L/min								x	2*
Manifold, 8 tube capacity								x	2*
Tubes, Tenax, capable of being fitted with <2mm Teflon aerosol filter, with end caps								x	50
Tubes, Carbopack, capable of being fitted with <2mm Teflon aerosol filter, with end caps								x	50
Knife, multi**function** tool	x	x	x						1
~~Scalpel plus blades~~									3
Scissors	x	x	x						2
Pliers, needle nose	x	x	x						1
Tweezers, 15 cm	x	x	x						5
Safety goggles[1]	x	x	x	x					2
Gloves, **nitrile,** disposable, **different sizes**	x	x	x	x				x	15 pairs
Bar coded labels[2]									12/sheet, 15 sheets
Bar code reader[3]									2*
Tamper-indicating seals[4]									300/roll
Garbage bag, approximately 120 L, chemically resistant (**Tyvek**)	x	x	x	x					**10** ~~5~~
Absorbent wipes, standard	x	x	x						1 box

[11] **Also a part~~Part~~ of the Inspectors Personal Equipment**

[2] **optional item;**

[3] **optional item**

[4] **Also a part of the Team Equipment**

Item	Solid ~~Bulk~~ Sample	Liquid ~~Bulk~~ Sample	Wipe Sample	Sample Splitting	~~Other Matl. Sample~~	~~Water Sample~~	~~Soil Sample~~	Vapour/ Aerosol Sample	~~Total Items~~ Minimum Number
Bowl - stainless steel, 1 L capacity	x						x		8
~~Sieve - stainless steel, 1.70 mm mesh, approximately 10 cm (Dia.)~~							x		~~8~~
Permanent marker, **various colours**	x	x	x	x					6 ~~2~~
Packaging tape, 5 cm to 6 cm wide			x	x					6 ~~1~~ roll
PVC tape, 2 cm wide, various colours	x	x	x	x					4 ~~3~~ rolls
Stiff wire, 20 G			x						5 ~~10~~m
~~Forms, carbonless, duplicate~~									~~2 packs*~~
Pens **various colours**	x	x	x	x					6 ~~3~~
Clipboard	x	x	x						2 ~~1~~
Hacksaw **small**	x	x	x		x				2 ~~1~~
Instant camera [5]	x	x	x						1
Films for Instant camera [4]	x	x	x						5 packs
Explosion-proof flashlight[6]									2
~~Miner's lamp~~									~~2~~
Measuring tape, chemical resistant, 30 m [4]	x	x	x						1
Ruler, plastic, 30 cm. [4]	x	x	x						1
Plastic, ground sheet, chemical resistant, 2 m sq.[7]	x	x	x						4 ~~10~~
Forward sampling box, approximately 75x30x30 cm (disposable)	x	x	x						4 ~~1~~
~~Spare batteries for electrical equipment~~									~~1 set~~
Umbrella, wind resistant	x	x	x						2

*) Duplicated items required because crucial for the completion of sampling.

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[5] Also a ~~P~~part of the Team Equipment

[6] Also a part of the Inspectors' Personal Equipment

[7] See item 6 Attachment 12

Item	Solid Sample	Liquid Sample	Wipe Sample	Sample Splitting	Minimum Number
Glass vial with screw cap, Teflon liner, 40 ml				x	64
Glass vial with screw cap, Teflon liner, 4 ml				x	80
Glass vial, screw cap with Teflon liner, 25 ml				x	5
Tube rack compatible with the vials, metal				x	2
Liquid Sample Collection Kit including: Syringe, glass, 10 ml with Luer lock connector; Stopcock, Luerlock; Needle, Luer, with square cut or domed tip, compatible with 0.1"ID TFE tubing; TFE tubing 1/8"OD, 0.1"ID cut to 5m length; weight for tubing, Teflon coated, 20-30g; Tie down strip, plastic, 5cm		x			5
Syringe, glass, 10 ml with Luer lock connector		x		x	5
Needle, Luer, with square cut or domed tip, compatible with 0.1" ID PTFE tubing		x		x	10
Tie down strips, plastic, 5cm		x			20
Bags, ziplock plastic, different sizes	x	x	x	x	2 x 20
Tape, Teflon, 2 cm	x	x	x	x	1 roll
Labels, different sizes	x	x	x		30
Decontamination solutions, site dependent	x	x	x	x	2 x 1 L
Hazard Label Tape, 20m	x	x	x		2 rolls
Marking flags, plastic, small size	x	x	x		10
Refrigerator/freezer, lockable, portable with variable temperature control, battery pack, recharger	x	x	x	x	1
Paint scraper with disposable blade	x				2
Disposable blades for paint scraper	x				10
Dichloromethane, gas chromatographic grade			x		100 ml

Item	Solid Sample	Liquid Sample	Wipe Sample	Sample Splitting	Minimum Number
Methanol, GC grade,			x		**100 ml**
Graduated pipettes, glass, 2 ml				x	**30**
Rubber bulbs for graduated pipettes				x	**20**
Square boards 25 x 25 cm [8]				x	**5**
Gloves, durable, chemically resistant, different sizes	x	x	x	x	5 pairs

[8] **See item 1 Attachment 12**

Revisions to C-I/DEC.71, Attachment 12

~~MATERIALS TO BE INCLUDED IN THE STANDARD SAMPLING KIT~~

~~Table 1. Additions to a standard sampling kit.~~

~~Materials~~	~~Solid and bulk samples~~	~~Total number of items~~
~~**Square boards (25 cm)**~~	~~**X**~~	~~**5**~~
~~**Roll of aluminium foil (30 cm width, approx. 30 m length)**~~	~~**X**~~	~~**1**~~
~~**Spatulas (20 - 25 cm blades)**~~	~~**X**~~	~~**8**~~
~~**Jars/vials (pre-cleaned 50 ml wide-mouth type)**~~	~~**X**~~	~~**64**~~
~~Gloves (consistent with the OPCW safety procedures)~~	~~X~~	~~8~~
~~**Plastic sheet (approx. 100 x 100 cm, approx. 0.1 mm thickness)**~~	~~**X**~~	~~**8**~~
~~**Glove bag (approx. 100 x 100 x 60 cm)**~~	~~**X**~~	~~**8**~~

Revisions to C-I/DEC.71, Attachment 21

~~Amendment of items in the Sample Collection Kit for liquid sampling~~

~~Item~~	~~Quantity in a kit~~
~~Syringe, polypropylene, **60ml** 100 ml, luer lock~~ [9]	~~8~~
~~Syringe, glass, 10 ml, luer lock~~	~~8~~
~~PTFE tubing, **1.6mm** 10G~~ [6]	~~50 m~~
~~Stopcock, luer lock, compatible with 10G tubing~~ [6]	~~8~~
~~Weights for tubing, Teflon coated 25 g~~ [6]	~~10~~

[9] **See list Attachment 5**

2. Sample Preparation Kit(s) GC/MS (C-I/DEC.71, Portable Equipment, Item 31)

Technical specifications for GC/MS Sample Preparation Kit, Revision 1

The contents of the revised GC/MS sample preparation kit is based on the OPCW sample preparation procedures for soil, aqueous and wipe samples.[10] Each kit comprises items sufficient for the analysis of a maximum of five soil and a total of nine aqueous/wipe samples. If a larger number of samples of a single type is expected to be taken, the contents of the kit must be modified accordingly. All items in direct contact with the samples are included in appropriate packaging and certified pre-cleaned and/or sterilised for analytical use. The purity of chemicals and the composition of test mixtures are certified. All items are packaged in suitable sealed shipping containers.

The kit should also allow the processing of other materials and bulk liquid samples (taken with the sampling kit, C-I/DEC.71, Attachments 5, 12, and 21 and future revisions), although studies with these sample types have not been done.

This list of items should be regarded as indicative only. Improvements in OPCW procedures may lead to revisions in the contents of the kit.

The changes to the previous version are marked with revision marks.

Reusable items	**Minimum number**
Fume hood fulfilling the present internationally recognised requirements set for fume hoods, such as DIN, OSHA (US) and BS standards. Normal linear airflow velocity at the face should be over 0.5 m/s (measured in compliance with BSI DD80 or equivalent) with approx. size 90 x 90 x 90 cm.	1
Nitrogen ~~generator~~ **cylinder, 2 m^3, with regulator** (or equivalent **generator** ~~cylinder with regulator~~) for heater/evaporator	1
A heater/evaporator with separate aluminium heating blocks (**two** ~~three~~ sizes compatible with the vials **and centrifuge tubes**) and **9** ~~6~~-position nitrogen purge concentrator with tubing for connection to nitrogen **cylinder**/generator; **stainless steel needles, replacement tubing, metal post**	1
Top loading balance, electronic, with capacity 0-200 g, precision +/- 0.1 g	1
Centrifugal evaporator, with ~~4 to 8 sample~~ rotor compatible with 25 ml glass centrifuge tube	1
~~Rotorvane~~ **p** Pump with water/**oil** trap for centrifugal evaporator	1
SPE 12 port vacuum manifold with vial holder compatible with the vials, **trap kit, outlet needles, spare stopcocks, adapters**	1
Vacuum and pressure station for SPE 12 port vacuum manifold	1
~~Trap kit for SPE 12 port vacuum manifold~~	~~1~~
Adjustable pipette, 0.5 - 5 ml	**4** ~~2~~
~~Adjustable pipette, 2 - 10 ml~~	~~2~~

[10] The original contents of the kit were based on the joint procedures provided by Finland and the United States of America. These procedures have now been adapted to OPCW equipment and improved on the basis of practical experiences from users and development work done by Finland.

Reusable items cont.	**Minimum number**
Bar-code reader	**1**
Centrifuge compatible with 15 ml **glass** ~~polypropylene~~ centrifuge tube	1
Tube rack compatible with centrifuge tubes, **metal**	1
Tube rack compatible with the vials, **metal** ~~glass filled acetal~~	1
Digital alarm timer	1
Ultrasonic bath, small size	**1**
Extension 10m , 4 sockets	**2**
Adapter	**5**
Disposable items[11]	**Minimum number**
Beaker, glass, 50 ml	6
Glass vial with screw cap, Teflon liner, 8 ml (approximately)	20
Glass vial with screw cap, Teflon liner, 25 ml (approximately)	**144**
Glass vial with screw cap, Teflon liner, 4 ml (approximately)	**200**~~144~~
~~Glass insert compatible with 4 ml glass vial, 0.35 ml (approximately)~~	~~20~~
Graduated cylinder, glass, 10 ml	20
Pipette tip, for adjustable pipette (0.5 - 5 ml)	40
~~Pipette tip, for adjustable pipette (2 - 10 ml)~~	~~40~~
Syringe, polypropylene, luer lock,10 ml	100
Syringe filter, polypropylene, 25 mm diameter, 0.45 micrometer pore size with binder-free glass fiber prefilter	**100**
Sterilisation filter unit, nylon, 200 ml, 0.45 micrometer pore size	20
Syringe, glass, 500 microliter	**10**~~6~~
Filter paper, Whatman number 4, diameter 90 mm for funnels	**100**~~1 pack~~
Funnel, short stem, diameter 5 cm	50
SPE Cartridge, SCX , 500 mg / 3 ml	**40**~~20~~
SPE Amino Cartridge, NH_2 100 mg / 1 ml	**40** ~~20~~
Adapter for SPE Cartridge, compatible with SCX/NH2 cartridge and 10 ml polypropylene syringe	**45** ~~40~~
~~Outlet needles for SPE 12 port vacuum manifold~~	~~24~~
~~Spare stopcocks for SPE 12 port vacuum manifold~~	~~12~~
~~Stainless steel needles compatible with 6-position nitrogen purge concentrator~~	~~6~~
~~Replacement tubing for 6-position nitrogen purge concentrator~~	~~1 m~~
~~Hose clamps compatible with the tubing for 6-position nitrogen purge concentrator~~	~~4~~
Centrifuge tube, glass, 25 ml **with Teflon lined screw cap**	50
Centrifuge tube with plug seal cap, **glass** ~~polypropylene~~, 15 ml, rated to 3000 G	50
Transfer pipette bulbs, rubber	**20** ~~1 pack~~
Transfer pipette, glass, short neck, 2 ml	**250** ~~1 pack~~
Dichloromethane, gas chromatographic grade	500 ml
Water, type 1 (ASTM)	100 ml
Methanol - Triethylamine (1%, v/v)	200 ml
N,O-bis-(trimethylsilyl)trifluoroacetamide (BSTFA)	20 ml
Hexane, gas chromatographic grade	25 ml

11 These items are replacement components used to replenish the kits.

Disposable items[12] cont.	**Minimum number**
0.1 N Hydrochloric acid, HCl, reagent grade	50 ml
2.0 N Hydrochloric acid, HCl, reagent grade	50 ml
0.1 N Ammonium hydroxide, NH4OH, reagent grade	50 ml
Ammonium hydroxide, NH4OH, **25** ~~27~~ -30% as Ammonia, reagent grade	25 ml
Methanol, gas chromatographic grade, 99.8%	500 ml
pH paper, 1-14	1 roll
~~pH paper, 9 to 12 in increments of 0.5 pH units~~	~~1 roll~~
pH paper, **6.4 to 8.0** ~~6.8 to 8.4 in increments of 0.5 pH units~~	1 roll
pH paper, **3.8 to 5.8** ~~3.0 to 5.5 in increments of 0.5 pH units~~	1 roll
pH paper, **0.5 to 5.5** ~~0.0 to 3.0 in increments of 0.5 pH units~~	1 roll
Sodium sulfate, anhydrous, Na2SO4, reagent grade	50 g
Decontamination solution, site dependent	2 litres
Tetrahydrofuran (THF), anhydrous, 99.9% pure, stabilised with less than 0.025 % Butylated hydroxy toluene	100 ml
3,4-Dimercaptotoluene(DMT) **in acetone, 5mg/ml, not older than 2 month**	**10** ~~1~~ ml
"OPCW GC/MS HCB Mixture" containing ~~Hexachlorobenzene~~ 50 µg/ml (microgram per millilitre) **of hexachlorobenzene** in dichloromethane	2 ml
"OPCW GC/MS Test Mixture" ~~Test mixture~~ containing **10** ~~12.5~~ µg/ml (microgram per millilitre) ~~each in dichloromethane~~ of **each**: Trimethylphosphate 2,6-Dimethylphenol 5-Chloro-2-methylaniline Tri-n-butylphosphate Dibenzothiophene Malathion Methylstearate **n-alkanes (C8 to C24, even numbers: octane, decane, dodecane, tetradecane, hexadecane, octadecane, eicosane, docosane, and tetracosane)** **in dichloromethane**	**2** x 2 ml
~~Alkane mixture containing n-alkanes (C_8 - C_{24}, even members at a concentration of 50 µg/ml (microgram per milliliter)~~	~~2 ml~~
Barcode label (with also alphanumeric readout)	1 pack
Adhesive label, **different sizes** ~~8 mm x 20 mm (approximately)~~	**100** ~~1 pack~~
Sample preparation forms~~, carbonless, duplicate~~	1 set
Clipboard for sample preparation form	1
Laboratory notebook	1
Pen, permanent, archive approved**, different colours**	**10** ~~2~~
Marker, permanent**, different colours**	**10** ~~4~~
Pair of scissors	1
Forceps, stainless steel**, different types**	5
Sealing film	1 **roll**~~pack~~
Spatula, stainless steel, **different sizes and shapes** ~~spoon type~~	12

12 These items are replacement components used to replenish the kits.

Disposable items[13] cont.	**Minimum number**
Absorbent wipe, standard	2x200~~2 boxes~~
Laboratory coat, **different sizes**	5 ~~2~~ coats
Gloves, **nitrile, different sizes** ~~latex~~	2x100~~2 boxes~~
Gloves, durable, chemically resistant, **different sizes**	2x10~~1 pack~~
Waste bottle, wide mouth, volume 2 litres with chemical resistant lid	1
Waste bottle, wide mouth, volume 4 litres with chemical resistant lid	1
Wash bottle, polyethylene, 250 ml	2
Adsorbent paper underneath plastic (bench coat)	**1 roll**
Detergent, phosphate free	**1 l**
2% (v/v) concentrated hydrochloric acid in methanol, freshly prepared	**10 ml**
Waste bags, different sizes	**10**
Beaker, 2000 ml	**2**
Tray, different sizes	**10**
Signs and Tape to mark sample preparation area, different sizes	**20**

Explanation of revisions:

bold	new or modified item
~~strike through~~	deleted item
small size	optional methods only

3. Photographic Equipment (C-I/DEC.71, Portable Equipment, Items 7, 8 & 9)

(a) Instant Camera
(b) 35mm Camera
(c) Video Camcorder with Tape player

Add to current specifications for all equipment:

The use of digital imaging technology should be considered if it can be shown that the final hard copy of the images produced can be verified, either by chain of custody or security seal.

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13 These items are replacement components used to replenish the kits.

Attachment 7

MEDICAL EQUIPMENT

1. Advanced Treatment Kit (C-I/DEC.71, Medical Equipment, Item 2)

1.1 Purpose

- No change

1.2 Operational Features

- No change

1.3 Specifications

- **Change** "The kit may consist of a number of modules that may be carried in separate medical containers. These may be rigid protective cases, boxes or durable packs."

1.4 Contents

(a) New addition to the Indicative list of medications

- glyceryl trinitrate sublingual spray
- polymyxin b eye drops and ointment
- dental local anaesthetic gel
- intravenous / intramuscular non steroidal anti-inflammatory preparation
- topical non steriodal anti-inflammatory preparation
- local anaesthetic with adrenaline
- local anaesthetic without adrenaline
- antiviral cream and tablets
- antifungal cream and tablets
- antimalarials
- antihistamine
- ketamine
- sedative benzodiazepine
- antihypertensive medications
- antiparasitic medications
- steroidal anti inflammatorys
- artificial and lubricating eye drops
- specific thermal, chemical burns dressings, bandages, blankets

(b) Other Items: New additions

- temporary dental filling
- IPE cutting knife
- IPE cutting scissors

- digital thermometer
- various bandages and dressings
- scissors general purpose
- urinary catheterisation packs
- thermal insulation blanket
- urine specific gravity / osmolality testing
- emergency cricothyroid puncture and respiration kit
- sharps container
- betadine swab sticks
- silver nitrate application sticks
- examination pen light
- cervical collar supporting and splinting device
- spinal column supporting and splinting device
- limb fracture splinting device
- blood glucose test sticks
- large wound dressing pads
- small wound dressing pads
- endotracheal tube securing/fixing device
- surgical probe for wound exploration
- forceps toothed
- packaged wound closure instrument set
- adhesive wound closure set
- endotracheal tube introducer
- small head lamp
- medical identification tags, labels, markers
- medical reference texts
- nasal speculum
- compact battery operated oxygen saturation monitor
- compact battery operated blood pressure monitor
- sterilisation fluid (powdered constituent water soluble)
- electrolyte replacement in liquid or powdered form for rehydration
- naso-gastric tubes
- irrigation lens
- cyalume sticks, multi coloured (white, red, green, yellow)

(c) Amendments

in Medications

- replace 'nitro glycerine tablets' with 'Glyceryl trinitrate tablets'

in Other items

- replace 'sucker, hand operated' and 'respirator, air driven, compact' with
  'resuscitator, hand operated with capable oxygen supply'
  'resuscitator/respirator air/oxygen driven, oxygen delivery, compact'
  'suction device compressed gas operated or suction device hand operated'
  'suction device mechanical driven'

2. Chemical Weapons Treatment kit (C-I/DEC.71, Medical Equipment, Item 1)

2.1 Purpose

- No change

2.2 Specifications

- No change

2.3 Contents

(a) Addition of new items

- Atropine Autoinjectors
- Diazepam Autoinjectors

(b) Amendment of current items

- Cyanide poisoning kit and treatment kit
- Vesicant Compartment
- dimercaprol
  - (1) DMSA meso2,3,dimercaptosuccinic acid
  - (2) DMPS 2,3,- dimercapto-1-propanesulphonic acid

3. General First Aid Kit (C-I/DEC.71, Medical Equipment, Item 3)

Action to be taken

- Name change only to " Inspectors' First Aid Kit"

Purpose

- No change

Operational feature

- No change

Specifications

- Kit to be contained in a suitable protective container.
- Kit to be carried and accessible to inspectors at all times.
- Delete information about advice of physician.

Attachment 8

ADMINISTRATIVE EQUIPMENT

1. Short Range Radios (C-I/DEC.71, Administrative Equipment, Item 7)

1.1 Add to Accessories

(e) Programming kit for radios, including software, for use by trained and authorised staff.

2. Computer (Notebook/Printer) (C-I/DEC.71, Administrative Equipment, Item 2)

2.1 Physical Features

- Change "Physical Features" to "Physical Features - Notebook Computer"
- Add "Physical Features - Printer"
- add the following points under "Physical Features - Printer"
- must be compact and easily transportable

2.2 Technical Specifications

- Change "Technical Specifications" to "Technical Specifications - Notebook Computer"
- Add "Technical Specifications - Printer"
- add the following points under "Technical Specifications - Printer"
- Must operate over a wide range of voltages (100 - 240 Volts AC, 50/60 Hz).
- Weight must be less than 20 kg.
- Laser printers must print faster than 4 pages/min.
- Ink jet printers must print at least 3 pages/min.
- Print/Toner cartridges should not leak when equipment is rotated 360 degrees in any direction.

Protective & Safety Equipment

1. First Aid Kit Personal (C-I/DEC.71, Protective & Safety Equipment, Item 17)

Change name from "First Aid Kit" (personal) To General First Aid Kit

1.1 Purpose

- To provide a medical dressing kit for a non specialised health and safety first aid person.

1.2 Operational Features

- No Change

1.3 Specifications

- No Change.

1.4 Contents: Addition to current list

- cetrimide 0.5% or betadine solution
- general purpose scissors
- general purpose tweezers
- Large wound dressings
- Medium wound dressings
- Non stick wound dressings
- surgical gloves
- Laerdal pocket mask
- normal saline (disposable) volume < 100ml
- Dressing pack

Attachment 10

OCCUPATIONAL HEALTH EQUIPMENT

1. Individual heat stress monitor (C-I/DEC.71, Occupational Health Equipment, Item 1)

1.1 Purpose
add:

- Allow for the monitoring of individual physiological (heat) strain in response to heat stress.
- To provide information to wearers and medical staff on their physiological state during exposure to heat stress.
- To evaluate the degree of heat strain that is present in the work place

1.2 Operational Features
add:

- Unit should have the ability to alert the wearer or medical staff of excessive physiological parameters, e.g. heart rate or body temperature.
- The unit should alarm by either audible or visual alert.
- The unit should have the ability to record the physiological parameters.
- The Unit should allow for evaluation of physiological data collected, downloaded and be compatible with computer systems for viewing of physiological data, recording of trends in physiological data and clinical interpretation of physiological parameters.
- Transmission of physiological data to receiver may be through direct cable or wireless transmission.

1.3 Add paragraph "Accessories" with the following text

- **Heart rate monitor**
  - Must transmit information through the layers of IPE to an external receiver.
  - Should be of rugged construction, to enable field use.
  - Must not interfere with inspectors efficiency.
  - The unit should not be affected by perspiration or water.
  - Complete unit must weigh less than 100 grams.
  - Must have an adjustable threshold setting.
  - The unit should operate for over 8 hours continuously.

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