Attachment 01

CLS 411 – Maintenance of Fire Extinguishing Systems Paragraph 5.1 – 5.5

5.1 <u>Basic Services:</u> The Contractor shall perform routine maintenance, routine repair, scheduled repairs, emergency repairs, safety inspections at miscellaneous fire extinguishing systems at USAG Bavaria Military Communities in accordance with the German ordinance on workplaces (in German: Arbeitstaettenverordnung - ArbStättV); and the German ordinance on Industrial Safety and Health (Betriebssicherheit Verordnung - BetrSichV); as well as a wide variety of regulations from the U.S. National Fire Protection Association (NFPA) and the German Association of Electrical, Electronic and Information Technologies (in German: Verband der Elektrotechnik Elektronik Informationstechnik (VDE)) as following:

-VdS CEA 4001 (sprinkler systems, in German: Sprinkleranlagen)
-VdS 2108 (foam extinguishing systems, in German: Schaumlöschanlagen)
-VdS 2109 (water spray extinguishing systems, in German: Sprühwasser-Löschanlagen)
-VdS Schadenverhütung GmbH, claims settlement (VdS is an owned subsidiary of the German Insurance Association (GDV)).
-DIN EN 12845 Fixed firefighting systems

5.1.1 Contractor shall perform Monthly Maintenance and Safety Inspections at Sprinkler Systems including DEHOUST Sprinkler and WILO system in accordance with (IAW) described conditions in PWS Para 2.4.4.3.1 and IAW Technical Exhibits TE 07, 08, 10.

5.1.2 Contractor shall perform one (1) Semi-Annual Maintenance and Safety Inspections at Sprinkler Systems including DEHOUST Sprinkler and WILO system IAW described conditions in PWS Para 2.4.4.3.1 and IAW Technical Exhibits TE 07, 08,10.

5.1.3 Contractor shall perform one (1) Annual Maintenance and Safety Inspections at Sprinkler Systems including DEHOUST Sprinkler and WILO system IAW described conditions in PWS Para 2.4.4.3.1 and IAW Technical Exhibits TE 07, 08,10 .

5.1.4 Contractor shall perform two (2) Semi-Annual Maintenance and Safety Inspections at Ansul Systems IAW described conditions in PWS Para 2.4.4.3.1 and IAW Technical Exhibits TE 01.

5.1.5 Contractor shall perform two (2) Annual Maintenance and Safety Inspection at Guardian Systems IAW described conditions in PWS Para 2.4.4.3.1 and IAW Technical Exhibits TE 02.

5.1.6 Contractor shall perform one (1) Annual Maintenance and Safety Inspection at Dry Chemical Systems IAW Technical Exhibits TE 03.

5.1.7 Contractor shall perform one (1) Annual Maintenance and Safety Inspection at Gas Systems IAW Technical Exhibits TE 05.

5.1.8 Contractor shall perform (1) Annual Maintenance and Safety Inspection a Fire Water Restraint System IAW Technical Exhibits TE 04.

5.1.9 Contractor shall perform one (1) Annual Maintenance and Safety Inspection at Wall Hydrants IAW Technical Exhibits TE 09.

5.1.10 Contractor shall perform Scheduled exchange maintenance service i.e. Changing of Liquid Extinguishing Agents as specified within the “ELIN” Schedules of the individual Installations

5.1.11 Contractor shall perform two (2) Annual Maintenance and Safety Inspection of the Spark extinguishing system in the carpentry shop **and connected dumper in the carpentry shop** IAW Technical Exhibits TE 06

5.1.12 Contractor shall perform Safety Inspections after ten (10) years of operation at different extinguishing systems as specified within the extended line-item number (ELIN) Schedules of the individual Installations

5.1.13 Contractor shall perform Safety Inspections after twenty (20) respectively twenty-five (25) years of operation at Sprinkler systems as specified within the “ELIN” Schedules of the individual Installations

5.1.14 Contractor shall perform On-Call-Repair Services

5.1.14.1 Contractor shall perform Emergency On-Call-Services

5.1.14 Time & Material - Labor Hours

The contractor shall provide repair work IAW the PWS Para 2.5 Work Management, Contractor/ Subcontractor assessed hourly rate if additional repair work outside the routine maintenance work will occur. Government assessed amount during contract award for the procurement and delivery of Parts and Material on respective CLIN.

5.1.15 Time & Material - Spare Parts Material and Spare Part

All part components prices and articles shall be presented in original on every cost estimate, DRO and invoice from the manufacturer source or aftermarket supply chain source. Government assessed amount during contract award for the procurement and delivery of Parts and Material on respective CLIN.

5.2. Tasks

5.2.1 Recurring Services according to CLINs 0001, 0004, 0007, 0010, 0013, 0016, 0019 and 0022

Preventive Maintenance work and safety inspection shall be performed at service intervals according to Attachment 03 on a monthly, semi-annually, and annually basis IAW the contractor’s established and provided performance schedule. Once performance of work is started it shall be performed continuously.

Prior to performance of each individual maintenance cycle as well as repair work, the contractor shall report to the Government COR according to Attachment 02 – Government POC’s (COR, Fire Department, DPW Utilities).

All services shall be performed in accordance with stated appropriate applicable US and German regulations in the course of the preceding paragraphs and among:

i) U.S. National Fire Protection Association (NFPA):

-NFPA 17A; wet chemical extinguishing systems Operation and Maintenance:
The standard includes guidelines for the proper operation and maintenance of these systems, emphasizing the importance of regular testing and inspections to ensure reliability

-NFPA 25; water-based fire protection systems
Standard for the Inspection, Testing, and Maintenance (ITM) of Water-Based Fire Protection Systems. This standard outlines the minimum ITM requirements for systems such as fire sprinklers, standpipe systems, and fire pumps.

-NFPA 75; fire protection for information technology equipment
Standard for the fire protection of information technology equipment, outlining requirements to safeguard IT areas from fire damage, smoke, heat and water.

ii) German industrial fact sheet:

- VdS 2091: 2022-03 (09) Maintaining the operational readiness of water extinguishing systems – sprinkler systems.

- VdS 2893 Maintaining the operational readiness of fire extinguishing systems with gaseous extinguishing agents

The technically relevant maintenance tasks per common reflected regulations are listed in

-Attachment 03

and shall be completed by the technician.

5.2.2 Performance / Service Scheduling

Planning and scheduling of appointments for the performance of maintenance work, safety inspections and repair work shall be the sole responsibility of the contractor. Access to the buildings and utility control rooms shall be coordinated directly with the responsible building owner, the responsible GOV POC's, Fire Departments, and Utilities personnel of the individual locations and prescribed in overarching PWS Para 1.4.

5.2.2.1 <u>Monthly Maintenance, Semi-Annual and Annual Maintenance and Safety Inspection and Safety Inspection :</u> Within eight (8) workdays after the Post Award Conference, the Contractor shall submit to the COR a proposed work and time schedule for the monthly Preventive Maintenance Work and Safety Inspections to be performed. The schedule shall show the Preventive Maintenance (PM) planned for the entire one-year cycle.

Within five (5) workdays of submission of the proposed schedule, the COR will agree or disagree to the proposed schedule. If disapproved, the contractor shall submit correction within five (5) workdays . The Contractor shall not deviate from approved schedules. An updated PM schedule, that highlights and shows any changes, shall be submitted to the COR at least fourteen (14) workdays days prior to the start of the

maintenance. The updated schedule will be subject to COR's approval in the same manner as the original schedule. Deliverable A011

5.2.2.2 Safety Inspection after Ten (10) and Twenty/Twenty-Five (20/25) Years of Operation: Requiring Activities will determine which systems will be ordered for inspection after the first maintenance cycle based on the contractor's assessment of the condition of the systems at the individual communities.

Within eight (8) weeks after contract award contractor has identified which systems shall be inspected, the Contractor shall submit to the COR a proposed time schedule for the ten (10) respectively twenty-/twenty-five (20/25) year safety inspection. The Contractor shall not deviate from approved maintenance schedules. Deliverable A023

Safety inspection of the sprinkler systems shall be accomplished IAW NFPA.

5.2.2.3 Change of Liquid Extinguishing Agent and Batteries Within thirty (30) workdays after the Post Award Conference, the Contractor shall submit to the COR a proposed time schedule for replacement of the liquid fire extinguishing agent and the change of the liquid inclusive the container exchange at the specified fire extinguishing systems. The Contractor shall dispose the unusable liquids as well as the old container and batteries IAW the German Waste Disposal Law (Abfallbeseitigungsgesetz).

5.2.2.4 On-Call Services for repair: Referring to PWS Para 2.5.3 On-Call Services, Work Management.

On Call Services for Repairs listed in the CLIN/ELIN schedule are primarily ordered by the DPW Word Order Service Desk (WOSD).

The Contractor shall respond to On-Call Service requests and be physically on-site within four (4) working hours of receiving the notification from the Government.

The four-hour response window applies strictly to standard Garrison working hours. If a service call is received late in the day, such that the four-hour response window extends beyond the end of the standard workday, the remaining time rolls over to the next morning. In such cases, the Contractor shall be on-site no later than 08:00 AM on the next consecutive working day.

The service shall be performed and shall include all costs associated with the technician's travel to the site mirrored in a labor hour, as well as pure labor hours, tools and equipment needed to **diagnose the defect and directly to repair the malfunction.**

5.2.2.5 Emergency On-Call Services: Emergency service call will be placed if either the local Fire Departments or the Military Police needs assistance after the regular operation hours on Weekends and Holidays.

5.2.2.6 Detected Deficiencies: If the Contractor detects a deficiency or malfunction on equipment during the performance of PM that meets the condition for an immediate routine repair (IRR) and can be accomplished during the performance of PM, the contractor shall immediately notify the COR referring to PWS Para 2.6.1.

5.2.2.7 Repair Parts:

The Contractor shall use only original system components, spare- and repair parts. Repair parts “made unknown” will not be accepted. The risk to cause damages to the individual systems repair parts or system components “made unknown” is very high. In case of any damage to the extinguishing systems using foreign spare parts, the contractor bears the full responsibility as well as all costs for the incurring damages.

5.2.2.8 Cost Estimates (CE):

For unscheduled repairs estimated to cost €5,000.00 or less, the Contractor may initiate repairs proactively to ensure system operability, subject to post-action review. For any repair where the estimated cost exceeds € 5,000.00, the Contractor must obtain prior authorization before commencing work. The Contractor shall submit a detailed cost estimate (including labor hours, rates, and itemized material costs) to the COR. The COR will review the estimate for technical necessity, accuracy, and price reasonableness, before approving the cost estimate.

The Contractor shall not begin work on any repair exceeding € 5,000.00 until they have received explicity, written approval from the COR. CE shall be received by the COR two (2) business days after the repair requirement has been identified. Referring to PWS Para 2.6.1.

5.2.2.9 DRO FORM: The Contractor shall establish and maintain records for all maintenance work, repair work, emergency repairs and safety inspections. The preparation of these records shall be based on the maintenance frequencies as well as the maintenance/repair guidelines of the manufacturers and safety regulations.

Completed original records shall be certified by the COR the same day the work is accomplished/completed.

All signed certificates shall be submitted to the COR No Later Than (NLT) with the submission of invoice. Invoices without evidence of performance will not be processed.

5.2.2.10 Functional Test, Operational Status: After completion of each maintenance cycle, the monthly-, semi-annually-, annually- and the safety inspections after ten (10) respectively 20/25 year inspections and all system repairs, a functional test for the proper operation of the system shall be accomplished.

Functional tests shall be accomplished and transmitted if installed through fire control system (Fire Departments & DPW Utilities Responsible POC’s) and documented on the Protocol, DRO Form and or Work Certificate.

Responsible Government Key personnel are listed on Attachment 02.

After completion of the work the entire USAG Bavaria fire extinguishing systems must be in an operable and alert condition.

All malfunctions shall be eliminated immediately and shall not be allowed to remain unresolved until the next maintenance cycle. This is the full responsibility of the contractual partner.

If any recognized fault cannot be repaired immediately, it is the responsibility of the contractual partner to start an immediate repair and to follow up involving COR and KO, creating self-directed Cost Estimates until the damage is repaired.

The system must be kept in one hundred percent (100%) operating condition, and any errors that are not diagnosed in a timely manner shall be at the expense of the contractual partner.

Entire systems shall be ready for use after every work assignment and the contractor will be held liable for non-compliance.

AQL: One hundred percent (100%) Compliance.

5.2.2.11. <u>Test Labels</u> The Contractor shall provide self-adhesive test labels and place them on each fire extinguishing system (Main Board). These labels shall show at least the following information in English language: -name of performing firm, -signature of the person who provided the test, -test date and the date of next inspection. Test labels shall be minimum 8 x 8 cm.

5.2.2.12 <u>Record Keeping / Update of Technical Exhibits/Residual Service Life</u>

The contractor shall review and update all Technical Exhibits TE 6 – TE 9 after performance of maintenance and inspection work, that all data on the TE's are up to date and correct according to PWS 2.7.4.1.
The very first update of the TE's shall be established during the first maintenance cycle for all systems. The updated TE's including all system components shall be provided to the COR NLT ten (10) days after the very first preventive maintenance cycle.

Clarification:
According to manufacturer guidelines and safety regulations, bottles, pressures hoses, extinguishing agent, batteries etc. shall change after certain periods in operation. (Attachment 03).
Some equipment shall be replaced semi-annually, some annually, every two years. Different Safety Inspections to be accomplished by an independent technical expert (DEKRA, TUEV) shall be accomplished every 5 years, some after 10, 15, 20 or 25 years in operation.

In no event shall the condition/characteristics of the equipment (or the offerors' failure to inspect and ascertain such condition/characteristics) constitute grounds for a request for an equitable adjustment (REA) or a claim after contract award.

5.2.2.13 <u>Maintenance Requirement and Additional Instructions</u>

Maintenance and Inspections shall be based on the manufacturer directed guidelines and regulations in reference to **Attachment 03.**

In addition the following maintenance instruction of the individual systems shall be separately outlined on the individual maintenance reports if the following described maintenance work is not already part of the manufacturer guidelines.

After completion of the work the entire USAG Bavaria system must be in an operable and alert condition. Any malfunction shall be eliminated, and the system shall be functional.

If the fault cannot be repaired immediately, it is the responsibility of the contractual partner to start an immediate repair and to follow up involving the COR and KO, creating self-directed Cost Estimates until the damage is repaired.

This is the full responsibility of the contractual partner.

Entire systems shall be ready for use after every work assignment and the contractor will be held liable for non-compliance.

5.2.2.13.1 Maintenance of Ansul R-102 Extinguishing Systems

Inspection of the release (including manual push buttons) and forwarding the alarm signal to the Utilities Monitoring Control Systems (UMCS) and the fire department. The Contractor shall state the residual service life of the bottles, pressure reducers, pressure hoses and the extinguishing agent at the maintenance protocol. The fuse links shall be changed during the first maintenance turn. This shall be calculated into the maintenance.

5.2.2.13.2 Maintenance of Guardian Kitchen Extinguishing Systems, Wet-Chemical System

Inspection of the release and forwarding the alarm signal to the UEMCS and the fire department. The Contractor shall state the residual service life of the bottles, pressure hoses and the extinguishing agent at the maintenance protocol. Replacement of the bottles shall be coordinated by the Siteforemen.

The fuse links shall be changed during the maintenance interval. This shall be calculated into the maintenance. Extinguishing agent/powder older than six years shall be checked for usable/unusable condition.

5.2.2.13.3 Maintenance of Dry Chemical Extinguishing Systems, incl. SVT Brandschutz system, Type PU 750

Inspection of the release and forwarding the alarm signal to the UMCS and the fire department.

The rod temperature sensor and manual trigger boxes shall be checked for accessibility and function.

The Contractor shall state the residual service life of the bottles, pressure reducers, pressure hoses and the extinguishing agent at the maintenance protocol. The fuse links must be changed during maintenance. This shall be calculated into the maintenance.

The release by temperature indicator/heat detector and push button alarm shall be inspected for function

5.2.2.13.4 <u>Maintenance of Fire Sprinkler Systems according to NFPA 25</u>

A predominant amount of Sprinkler Systems are overaged. For this reason, during testing of the Hygiene Standards, the water of the sprinkler systems may contaminate the drinking water system being flushed. This will cause the test results being false.

Therefore, the Contractor will not be held liable for those false results.

5.2.2.13.4.1 The Contractor shall provide Monthly Maintenance Requirements according to the entitled VdS directives described in Attachment 03 to include the following:

- Turn-off alarm system and operation prior to performance of maintenance work
- Check and clean connection for Fire Department (re-flow valve, draining, hose coupling)
- Check station for proper signs at the doors and connections
- Check water level of all storage container
- Check all systems pressures
- Check alarm of each alarm-valve-station and check all alarm devices
- Check operational position and securing condition of all shut-off devices
- Check pump aggregates – perform test run
- Check automatic and manual start device of all pumps
- Check fuel level of all diesel engines
- Check oil level of all pumps, compressors and diesel engines
- Cheek monitoring system
- Check function of flow detector
- Check automatic refill device of all extinguishing agent container
- Check foam injection device
- Check antifreeze level

The inspection includes but is not limited to the test alarm procedure, visual inspection of all fixtures and installations, inspection of water levels, checking of all pressures, checking the automatic pump release, checking batteries for functioning, checking control and alarm panels for functioning, and checking and testing flow switches.

5.2.2.13.4.2 The Contractor shall provide Maintenance Requirements during Semi-Annual and Annual Maintenance Cycles according to the entitled VdS directives as described in Attachment 03 and per VdS CEA 4001 which demonstrates the operator responsibilities directives for sprinkler systems – planning and installation and to include the following:
General

- Contractor shall turn-off alarm system and operation prior to performance of maintenance work

- Contractor shall check and clean connection for Fire Department (re-flow valve, draining, hose coupling)
- Contractor shall check station for proper signs at the doors and connections

Water Connection

- Contractor shall check manometer and line pressure
- Contractor shall check and clean rock catcher and strainer
- Contractor shall check all backflow prevention devices for mobility and function
- Contractor shall check flushing valve for feeding line, change battery if necessary

Wet Pipe Alarm Valve

- Contractor shall dismount valve, maintain and lubricate (also interior parts)
- Contractor shall check manometer, pressure switch and fittings
- Contractor shall check proper functioning of shut- off valve
- Contractor shall check function and tightness of the bypass line

Dry Pipe Alarm Valve

- Contractor shall dismount valve, maintain and lubricate
- Contractor shall check manometer, pressure switch and fittings
- Contractor shall perform flash-over testing (not during frost season)
- Contractor shall check function of alarm pressure switch, drain system
- Contractor shall check alarm valve for mobility
- Contractor shall clean filter of quick release and check membrane
- Contractor shall check loading time and tightness of quick release

Sprinkler Pump

- Contractor shall initiate a function test of the automatic and manual start-up device of the sprinkler pumps
- Contractor shall initiate a function test of the pump and its drives (test run has to be performed until the normal operation values of the drive motor has been reached)
- Contractor shall measure electrical load during test and notify
- Contractor shall check power supply and voltage at switch cabinet during operation
- Contractor shall check the manometer
- Contractor shall check stuffing gland, tighten if necessary
- Contractor shall check re-flow valves
- Contractor shall check shut-off valve

Sprinkler pipes

Pipe networks of dry systems shall be drained. Drainage (outlet) shall be filled with an anti-freeze agent at areas with sub-zero temperatures before end of October each contract period of performance.

Tank Filling Pump

- Contractor shall check the functioning of the automatic and manual start-up device of the pumps

- Contractor shall perform function test of pump and its drives
- Contractor shall check manometer
- Contractor shall check stuffing glands and tighten if necessary
- Contractor shall check re-flow valves
- Contractor shall check shut-off valve

Test Alarm

- Contractor shall check all mechanical and electrical alarm devices
- Contractor shall check all flow- detectors by draining thru an installed valve or Zone-check (manual release of flow detector is not allowed)
- Contractor shall check alarm bell for function, clean screen, lubricate bell
- Contractor shall check all malfunction and alarm reports to EMCS and fire alarm station, check recovery time

Air Compressor

- Contractor shall check manometer and pressure switches (on- and off points)
- Contractor shall clean and check condition (exterior)
- Contractor shall drain the vessel
- Contractor shall check oil level, check oil for condition
- Contractor shall check filter for condition

Additional Annual Requirements Include:

Storage-, Sub- and Pump Refill Tank aboveground and underground

- Contractor shall check filling level and condition of the appropriate monitoring system
- Contractor shall check floating valves and re-flow valves
- Contractor shall check shut-off valve
- Contractor shall check tank, if necessary cleaning, including emptying by contractor

Air Pressure Water Tank

- Contractor shall initiate a visual inspection of exterior corrosion protection
- Contractor shall check pressure, manometer, filling level and filling level indicator
- Contractor shall check re-flow valve for air and water feeder
- Contractor shall check shut-off valve
- Contractor shall initiate a function test of the automatic refill-and re-feeding devices for storage-, sub-, pump refill- and air pressure water tank

Town Water Connection Station

- Contractor shall check and clean filters

- Contractor shall initiate testing of the flow pressure before the alarm valve at systems, which are directly fed by the public water supply system
- Contractor shall check pressure before and after the alarm valves

Sprinkler Pump

- Contractor shall perform flow- thru metering test by using the test line, check pump and water supply for calculated operation points

Sprinkler Pipe Lines

- Contractor shall check condition of sprinkler pipe lines, sprinklers and check pipe suspensions

Sprinkler

- Contractor shall inspect and clean, if necessary
- Contractor shall check site conditions for changes and deficiencies

Sprinkler Systems Control Panel

- Contractor shall check power connection for function
- Contractor shall clean cabinet, check all connection terminals with screw connections for tight fitting
- Contractor shall check all control values of detectors-, controls- and monitoring groups by measuring, adjust if necessary
- Contractor shall check all detectors-, controls- and monitoring groups for wire breaks and short out display by test switch
- Contractor shall check batteries/ charging devices: measure charge voltage and adjust if necessary, in order to check the capacity of the batteries a load test is to be performed and if necessary batteries have to be replaced. Disconnect batteries, malfunction report has to appear, connect battery feeder line with condenser, malfunction shall reset. Create short out thru condenser connections. Malfunction report has to appear
- Contractor shall check dependent/ safety and connection switching for function
- Contractor shall check function of all switches and buttons by manipulating
- Contractor shall check transfer of alarms and malfunction to the UMCS and the Fire Alarm System, check the fire Alarm Panel for correct texts

Equipment System Components requiring additional maintenance work, other than specified above in the following buildings:

Vilseck, Building # 553:

Water Spray System: In addition to maintenance work the following shall be performed:

The flame detectors, heat detectors, manual release boxes and the push button alarms shall be inspected for accessibility and function.

Inspection of function and automatic start of the pump.

Vilseck, Building # 308:

In addition to the maintenance work the following shall be performed:

Review the function and automatic starting of the backup power unit. Test the backup power unit. Measure rotational speed, oil pressure, and coolant temperature according to the manufacturer guidelines and users requirement.

Vilseck, Building # 1704:

In addition to the maintenance work the following shall be performed:

Inspect smoke detectors for function.

GRAFENWOEHR LOCATIONS BELOW:

Grafenwoehr, Building # 301 –Paint Shop:

In addition to the maintenance work the following shall be performed:

Orderly dispose of the accumulated foam-/water mixture during the flushing of the system.

Grafenwoehr, Building # 696:

In addition to the maintenance work the following shall be performed:

Inspect the smoke detectors for function.

Grafenwoehr, Building # 720 Refuse Shredder Facility:

Water Spray System: In addition to the maintenance work the following shall be performed:

The flame detectors, heat detectors, manual release boxes and the push button alarms shall be inspected for accessibility and function.

Inspect function and automatic start of the pump.

Spray system is partially installed between transporting belts.

Grafenwoehr, Building # 700 PX Complex:
The 2ea sprinkler pumps (each 109 kW) are driven by diesel fuel engines.
Maintenance shall be performed in accordance to the manufacturer regulations.
Technical Data:
Manufacturer Engine: Kagema Industrieausrüstungen GmbH
Type DPA Ser.no: 44903.1/44903.2
Controller DPS 205/24
Construction year: 2007
Motor Type: Iveco N45 MNS F40
Pump: KSB MX 125-250

HOHENFELS LOCATIONS BELOW:

Hohenfels, Building # 525:

The sprinkler pump is driven by a diesel fuel engine. Maintenance shall be performed in accordance with the manufacturer guidelines/regulations.
Technical Data:
Manufacturer: Boos Aggregatebau GmbH
Construction year: 1988
Motor Type: IHC / D358 55kW
Ser.no: 2-8808845

5.2.2.13.4.3 Maintenance of Fire Sprinkler Systems IAW Para 5.2.1

The Contractor shall provide monthly inspection and maintenance based on the manufacturer guidelines:

- Check and clean test connections couplings
- Check water level of all storage container
- Check all systems pressures
- Check alarm of each apartment and check all alarm devices
- Check operational position and securing condition of all shut-off devices
- Check pump aggregates – perform test run
- Check automatic and manual start device of all pumps
- Check monitoring/control system
- Check function of flow detector
- Check automatic refill device

The contractor's inspection shall include but is not limited to the test alarm procedure, visual inspection of all fixtures and installations, inspection of water levels, check of all pressures, check the automatic pump release, check control panels for functioning, check and test flow switches. Contractor shall check transfer of alarms and malfunction to the UMCS, if installed.

Contractor shall inform the COR immediately, after recognizing the shut-off valve inside the apartment is closed by the occupant.

The contractor shall perform an inspection of the fire sprinkler systems inside all apartments exactly once per year. To minimize disturbance to residents, the Contractor shall make every effort to conduct these annual inspections while the apartments are vacant.

In the event an apartment remains occupied throughout the entire year, preventing a vacant inspection, the annual inspection requirement remains in effect. For these continuously occupied units, the Contractor shall arrange a specific inspection appointment with the occupant. All such appointments and coordination with occupants shall be facilitated and approved through the DPW Army Family Housing Division.

A visual inspection of all sprinklers to make sure they are not obstructed, damaged, corroded, covered with foreign materials, field paint, or showing signs of leakage and nothing else is attached to them or their covers will be performed by the contractor at non-occupied apartments only, unless apartments are occupied throughout the entire year. Inspection is required once a year. If apartments are occupied throughout the entire year, appointments have to be arranged with the occupant through the DPW Army Family Housing Division.

5.2.2.13.5 The Contractor shall perform maintenance and inspection of wall hydrants IAW the manufacturer's guidelines.

5.2.2.13.6. Maintenance and Inspection of Gas Systems in accordance Para 5.2.1

The Contractor shall perform the following maintenance work on the gas systems:

Shut-off in German: Brandmelde Zentrale (BMZ), the Fire Control Center and secure the system.

Check the filling level of the fire extinguishing agent tank and refill fire extinguishing agent, if necessary.

Check torque of valve face and initial tension at the tank valve.

Check pipe line and connections for tightness and damages.

Check pipe suspensions for damages.

Check malfunction and alarm reports to UMCS and fire alarm main control.

5.2.2.13.7 Maintenance and Inspection of Gama-tronik Kitchensafe Systems

The contractor shall provide the performance of maintenance and inspection according to GAMA-tronik Service Manual and Operating Instructions in Attachment 04. The 5th year inspection is subject to this contract.

5.2.2.13.8 Replacement of Liquid Agent/Exchange Bottles at Ansul Systems

Contractor shall take the extinguishing system out of operation and secure the system. Dismount bottle and fixtures. Contractor shall take out used extinguishing agent/liquid. Contractor shall replace bottle/cylinder for extinguishing agent. Replace nitrogen cylinder, replace pressure reducer and pressure hose. Contractor shall refill system with new extinguishing agent (appr. 12 liters) and nitrogen (gas cylinder) as stated within the respective TE's or in coordination with the COR. Contractor shall reinstall complete system and put it back to operation.

Contractor shall mark the replacement date of the replaced extinguishing agent and replaced parts at the bottle with a sticker or similar. Dispose old used extinguishing agent/liquid and other replaced parts.

5.2.2.13.9 Servicing of Ansul Systems after 10 Years of Operation

Contractor shall take the extinguishing system out of operation and secure the system. Contractor shall dismount bottle and fixtures as required. Contractor shall take out used extinguishing agent/liquid. Contractor shall replace bottle/cylinder for extinguishing agent. Replace nitrogen cylinder, replace pressure reducer and pressure hose. Contractor shall refill system with new extinguishing agent (appr. 12 liters) and nitrogen (gas cylinder) as stated within the respective TE's or in coordination with the COR. Contractor shall reinstall complete system and put it back to operation. Contractor shall mark the replacement date of the replaced extinguishing agent and replaced parts at the bottle with a sticker or similar. Contractor shall dispose old used extinguishing agent/liquid and other replaced parts.

5.2.2.13.10 Replacement of Liquid Agent/Exchange Bottles at Guardian Systems

Contractor shall take the extinguishing system out of operation and secure the system. Contractor shall dismount bottle and fixtures as required. Contractor shall take out old extinguishing agent and refill agent into the remaining bottle (7 lbs) as stated within the respective TE's or in coordination with the COR. Contractor shall reinstall bottle and put system back to operation. Contractor shall mark the replacement date at the bottle with a sticker or similar. Contractor shall dispose old used extinguishing agent.

5.2.2.13.11 Servicing of Guardian Systems after 10 Years of Operation

The Contractor shall perform all maintenance work that is written at manufacturer's instruction for monthly, annual, and every twelve-year inspections. Major maintenance service shall be done every 10 years.

Contractor shall take the extinguishing system out of operation and secure the system with the pin. Dismount bottles and fixtures. Replace the pressure hose assembly (no pressure test) by a pressure marked hose assembly according to NFPA 17A. Clean valve assembly, valve piping adapter, piping kit with all pipes and nozzles.

Contractor shall empty bottle, take out and dispose old extinguishing liquid chemical.

Contractor shall replace bottle by a new cylinder or by a pressure tested one (hydrostatically tested) by a competent person according to paragraph 15 BetrSichV and TRBS 1203. Old cylinder can be re-used by the contractor after the bottles passed the hydrostatically test.

The cylinders have to be replaced one by one only, not all the same time, as the system has to be kept operational.

This means, dismounting at one day and testing and reinstallation on another day/appointment is **not** possible.

Dismantled cylinders have to be immediately re-installed after testing the same day.

Contractor shall replace tension spring (no. 48410). Contractor shall refill and pressurize cylinder by extinguishing liquid (7 lbs) and nitrogen (no compressed air) as stated within the respective TE's or coordination with the COR. Contractor shall reinstall cylinder and all other parts, take system back into operation. Contractor shall dispose all replaced parts and extinguishing agent. Contractor shall mark the servicing date at the bottle with a sticker or similar.

5.2.2.13.12 Inspection after Twenty/Twenty-Five (20/25) Years of Operation

Twenty/Twenty-Five year inspection shall be accomplished in accordance with Para 5.2.1.

In addition the following parameters and system components must be in compliance with NFPA 25. Contractor shall state test results on the work certificate.

Contractor shall empty tank and check tank for corrosion and proper coating.
Contractor shall check 20% of the sprinkler heads for proper flow rate.
Replaced sprinklers shall have the proper characteristics for the intended application which shall include the following:
-Style
-Orifice Size and K-factor
-Temperature Rating
-Coating
-Deflector Type (i.e. upright, pending, sidewall)
-Design requirements
Flush all main lines
Replace all pressure gauges
Check internal and external piping for corrosion and leakage
Test hydrostatic pressure
Check/Test sprinkler pumps

5.2.2.13.13 Replacement of Batteries

The Contractor shall replace outdated backup batteries at alarm control panels. Contractor shall dispose old batteries IAW the German Waste Disposal LAW (Abfallbeseitigungsgesetz). The Contractor shall install batteries with VdS approval (stamp and certificate) only. The exchanged batteries shall have the same technical specifications and certifications as the old ones.

5.2.2.14 Orderly Disposal of Liquids

Foam and Water mixtures accumulated during system test shall be properly disposed of IAW the German Waste Disposal Law by the Contractor. Evidence of the orderly disposal shall be provided to the COR by request.

5.3 Invoice Procedure

5.3.1 The contractor shall submit original invoice, consecutively numbered against each Task Order on a monthly basis NLT fifteen (15) workdays after end of each month.

5.3.2 Invoice summary information: An excel spread sheet is required in conjunction with the invoice stating information IAW Para 5.4 Monthly Financial Status Report (MFSR). One invoice shall reflect the Army Family Housing (AFH) technical exhibits and another invoice shall reflect the Operation and Maintenance (O&M) Exhibits.

5.3.3 All respective repair order work and maintenance certificates in relation to each individual invoice shall be forwarded to the COR separated by Army Family Housing cost center and Operation and Maintenance cost center and also in a sequent manner and chronologically related.
The Government might request to upload the monthly certification bundle to a different location than sending per regular email.

5.3.4 The final invoice against the respective task order shall be referred to as such and shall be submitted not later than one hundred (100) working days after the end of a task order.

5.3.5 The Ceiling of each single CLIN cannot be exceeded at any time without prior written authorization of the KO.

Deliverable A024

5.4. Monthly Financial Status Report (MFSR):

Contractor shall submit a financial status summary to the COR on a monthly basis at the same time the invoice is submitted to WAWF, but NLT fifteen (15) workdays after end of month. The financial status report, associated with the applicable task/delivery order line items, shall be transmitted to the COR electronically and shall include the following:

- Task Order Number and PoP,
- Billing period,
- Total amount per line item,
- Amount invoiced against each line item,
- Cumulative amount invoiced to date against each line item
- Remaining balance amount of each task order line item.

The contractor shall notify the COR immediately once 75% of the total amount of the applicable task order or Item No has been reached. Note: All open work certificates in the pipeline (= not yet billed) must be considered for this notification.

Contractor shall not exceed total amount of any Line Item No, nor total Task Order amount at any time. Deliverable A025

5.5 Quarterly Progress Report (QPR) – (Cumulative Cost Consumption Report):

Contractor shall establish and provide a cost consumption report for all buildings including all system components. Cost consumption reports for each Military Community (MC) shall be submitted to the respective responsible COR electronically on a quarterly base.

Cost consumption report shall be structured as follows:

- Quarterly billing period
- Inventory number
- Cost per system and system component (per inventory number) including all cumulative costs for maintenance, repair and repair parts
- Cumulative cost consumption for each inventory number
- Cumulative year end cost consumption after submittal of the final invoice of each contract year and individual Task Orders.

Deliverable A026

(nothing follows)