

## CHEMICAL ALARM SYSTEM REQUIREMENTS

### 1. Chemical Alarm System

On the industrial premises of ANWIL S.A. The Chemical Alarm System is aimed at warning people in the event of hazards and dangerous incidents occurring on the company's premises and in the adjacent areas (emission of a chemical substance into the atmosphere, fire, explosion, etc.). The system features the following warning levels: level 1 alarm (activated locally by an employee at a specific in question), the other alarms: warning alarm, level 2 and level 3 alarms are activated in the system by the Company Dispatcher. The warning alarm is announced by means of the following devices: a button triggering the level 1 alarm in the system (on SW-type cabinets – where required on installations which are a source of a potential threat, as determined on an case-by-case basis), optical and acoustic signalling, sirens (activated for level 2 and 3 alarms), roadblock lights with LED information boards (activated from the system automatically with the level 1 alarm or additionally by the Company Dispatcher of ANWIL S.A.). All the elements of the Chemical Alarm System are compatible and interconnected with one another and form an integral entirety of a system supervised by the Company Dispatcher. The administrative buildings and the entire premises of the industrial facilities must be covered by the Chemical Alarm System. The owner of the facility/installation must ensure the functionality of the Chemical Alarm System wherever people are present and where necessary.

### 2. Temporary Chemical Alarm System:

The Contractor is obliged to provide the temporary Chemical Alarm System during the construction of facilities, including backup facilities and construction sites, wherever people are present and where necessary. ANWIL (the owner of the Dispatchers' Department system) will provide a box with the Chemical Alarm System signal for backup facilities and construction sites. For the purpose of maintaining the system security, ANWIL owns the cabinet and the cable supplying the system signals to it (ANWIL assumes the liability and sustains costs of maintaining and repairing these elements). All the other components of the system outside the cabinet (e.g. optical and acoustic signals, roadblock lights, cabling and power supply for these components) are the property of the Contractor and it is the contractor's duty to ensure that such components function properly and to conduct periodic maintenance works and repairs. The Contractor is obliged to report such requirements well in advance of the operation of the construction site and to consult on all requirements in this respect with the system owner (Dispatchers' Department at ANWIL S.A.).

### 3. System operation principle:

- 3.1 The premises of ANWIL S.A. is currently divided into more than twenty alarm sectors. Additional facilities will be assigned (depending on their location) to respective sectors; in justified cases, a new alarm sector may be established.
- 3.2 The optical and acoustic signalling system installed at the industrial facility (optical, acoustic and optical/acoustic signals, alarm sirens, traffic signals with LED boards) is an integral part of the entire Chemical Alarm System. The alarm system can be controlled from both a computer station located in the Company Dispatcher's room (Company Control Station) and a portable system (laptop) – connected to a separate dedicated Chemical Alarm network.
- 3.3 The logic for the operation and provision of a sufficient level of warning to people and blocking of access from outside with roadblock lights for the newly constructed part of the Chemical Alarm System is to be determined by the Owner of the installation/facility.

#### 4. Logic of the operation of the Chemical Alarm System (alarm stages).




In the event of a chemical accident, fires or other hazardous events on the premises of ANWIL S.A., the following chemical alarms are announced, depending on the scope and direction of the danger occurring:

- level 1 chemical alarm,
- alarm warning,
- level 2 chemical alarm,
- level 3 chemical alarm. Level 1 chemical alarm.

The level 1 chemical alarm is announced in the event of a local chemical emergency, involving no more than one installation of any of the Production Areas (alarm sector).

The level 1 alarm can be activated in the system by a supervisor/overseer of any level of the organisational unit where the threat should occur. The level 1 alarm is activated in a specific sector locally by an employee who presses the button on the "SW" cabinet; this alarm causes:

- activation of optical signalling devices with intermittent lights of the local alarm system – operating until the alarm is called off (deactivation procedures),
- intermittent acoustic signal of a local alarm – called off automatically after the lapse of 3 minutes,
- activation of the interlocking traffic lights on the access roads to the area (sector) where the risk occurs:
  - red lights - "STOP,"
  - green arrow (optional) – prescribed direction of travel,
  - LED information board.

ALARM ANNOUNCEMENT			ALARM CANCELLATION		
 Buczki / Dzwonki	 Sygnalizacja Świetlna	 Rozgłośnia Zakładowa	 Buczki / Dzwonki	 Sygnalizacja Świetlna	 Rozgłośnia Zakładowa
 3 minuty Dźwięk przerywany	<ul style="list-style-type: none"> <li>• pulsująca lamp ostrzegawczych,</li> <li>• blokadowa ruchu kołowego</li> </ul>	Komunikat: <ul style="list-style-type: none"> <li>• rodzaj zagrożenia,</li> <li>• miejsce powstania zagrożenia,</li> <li>• zasady postępowania</li> </ul>	 3 minuty Dźwięk ciągły	Wyłączenie sygnalizacji	Komunikat: Odwołanie alarmu







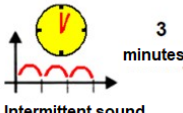
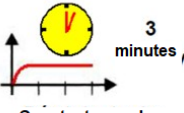
Only the Company Dispatcher may deactivate the level 1 alarm in the SCADA computer system; the deactivation causes:

- deactivation of the optical signalling devices,
- continuous siren sound for 3 minutes,
- deactivation of the roadblock lights.

#### 4.2 Alarm warning:

The alarm warning is used to warn employees of the facilities in the sectors concerned of the danger occurring. The Company Dispatcher activates it from the Chemical Alarm System; it generates the following signals:

- continuous light signal of the optical signalling devices operating until the alarm is called off,
- continuous acoustic signal of the signalling devices which automatically switches off after the lapse of 1 minute.

Alarm announcement			Alarm cancellation		
 B buzzers / Bells	 Light signalling	 Workspace radio station	 B buzzers / Bells	 Light signalling	 Workspace radio station
 Intermittent sound	<ul style="list-style-type: none"> <li>pulsating warning lights</li> <li>traffic blockade</li> </ul>	Announcement: type of hazard location of hazard safety guidelines	 Constant sound	Signal deactivation	Announcement: alarm cancellation

The warning alarm may only be activated and deactivated in the system by the Company Dispatcher.

#### 4.3 Level 2 chemical alarm







The level 2 alarm is announced should a chemical hazard occur which covers more than 1 alarm sector of any of the production areas, but does not extend beyond the industrial premises of ANWIL S.A.

The level 2 alarm is announced by the Company Dispatcher activating it in the computer system; the alarm causes:

- intermittent acoustic signal (15 s with a 10 s interval) of sirens for 3 minutes,
- flashing signalling of all optical signalling devices.

The alarm is cancelled by switching it off in the computer system by the Company Dispatcher; the alarm causes:

- continuous acoustic signal of sirens for 3 minutes.

Alarm announcement		Alarm cancellation	
 Sirens	 Workplace radio station	 Sirens	 Workplace radio station
 Intermittent sound	Announcement: substance type the direction of the hazard spreading hazard location need for evacuation	 Constant sound	Announcement: alarm cancellation

**Chemical alarm is cancelled on the order of the person in charge of the emergency operations, after the threat has been completely eliminated**

The level 2 alarm may only be switched on and off in the computer system by the Company Dispatcher.

#### 4.4 Level 3 chemical alarm

The level 3 alarm is announced in the event of a chemical threat extending beyond the industrial premises of ANWIL S.A.





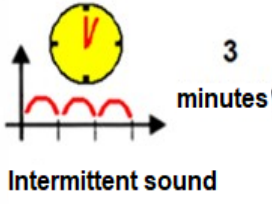
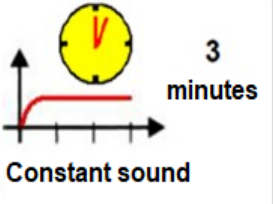
The announcement of the alarm is made in the system, as for the level 2 alarm, and the announcement of the threat in the area adjacent to the premises of ANWIL S.A., and located in the direction of the spread of the dangerous substance, using all available means, such as:

- all sirens installed on the premises of ANWIL S.A. and beyond,
- roadblock lights surrounding ANWIL,

- flashing signalling of all optical indicators.

The alarm in the scope related to ANWIL S.A. is recalled by being deactivated on the computer system by the Company Dispatcher; the alarm causes:

- continuous siren sound for 3 minutes,
- turning off the interlocking lights on the external roads (if activated).

Alarm announcement		Alarm cancellation	
 Sirens	 Workplace radio station	 Sirens	 Workplace radio station
 Intermittent sound	Announcement: update and clarification of information	 Constant sound	Announcement: • Alarm cancellation

The level 3 alarm may only be switched on and off in the computer system by the Company Dispatcher.

## 5. Components of the Chemical Alarm System:

5.1 Server cabinet with the SCADA visualisation system

5.2 SW-type master cabinet – controlling optical and acoustic signalling and roadblock signals with the option to activate the level 1 chemical alarm.

The owner of the installation/facility should analyse and consult with the relevant areas of ANWIL S.A. whether the newly constructed installation/facility poses a chemical hazard and will necessitate featuring the level 1 alarm in the Chemical Alarm System.

The SW-type cabinet comes with a button to activate the level 1 alarm and should be located in a place that it is readily accessible for the maintenance of the installation in question (e.g. master, control room – to be consulted with the owner of a specific installation/facility).

5.3 SP-type slave cabinet – controlling optical and acoustic signalling and roadblock signals

5.4 SS-type siren cabinet – controlling sirens

5.5 AKU-type battery cabinet

5.6 JBA-type cabinet – controlling external roadblock signals and warning LED boards

5.7 PB- and ZB-type cabinet – controlling optical and acoustic signalling and roadblock signals at construction sites and their backup facilities

All cabinets/boxes should be located in an readily accessible place for maintenance (to be consulted with the Owner of the installation/facility, the Maintenance Services Infrastructure specialist and the system maintenance company indicated by ANWIL S.A.).

5.8 Optical and acoustic alarms are used to signal level 1 chemical alarms and warning alarms.

5.9 Sirens located on the industrial premises of ANWIL S.A. are used to signal level 2 and 3 chemical alarms;

5.10 Interlocking traffic lights with LED information boards – are designed to block access and entry to a sector, bypass a sector which is a source of danger while the level 1 alarm is on and serve to redirect vehicle traffic to a non-threatened area of the company.

## 6. Technical standards:

All newly created SW-, SP-, SS-, AKU-, JBA-, PB- and ZB-cabinets and other system components must be compatible with the entire existing Chemical Alarm System effective at ANWIL S.A. and reproduce all the alarm patterns implemented by this system.

Additional system extensions and documentation must be agreed and accepted by the system's business owner (ANWIL Dispatchers' Department).

The cabinets should be installed indoors. The system is based on equipment from such manufacturers as: Siemens, Relpol and Verma.

The cabinets located outdoors should come with a heating system (to protect them against low temperatures in winter) and a ventilation system (to protect them against high temperatures in summer).

- 6.1 The standard currently applicable at ANWIL S.A. includes Schneider Electric boxes, Spacial CRN series, solid door type (no glazing) and the cabinet size selected to match the components used (avoiding unnecessary redundancy). The standard is to fit all the components in one cabinet (except for the batteries). We recommend using a separate enclosure of the same series to house the batteries (AKU). Cabinet colour: RAL7035. Mechanical resistance standard: IK10, IP66 waterproofing or one selected to suit the prevailing conditions at their locations.
- 6.2 PLC controller – S7-1200/1500
- 6.3 Switch managed – Simatic XC206-2SFP with SFP SM inserts,
- 6.4 Switch unmanaged – XB004-1LD
- 6.5 Removed I/O – IM155-6PN Siemens SIMATIC ET 200SP with stands and end of module
- 6.6 DI8x24VDC Siemens SIMATIC ET 200SP card
- 6.7 DQ8x24VDC Siemens SIMATIC ET 200SP card
- 6.8 HMI – SIMATIC HMI KP8 from Siemens
- 6.9 Power supply – 230VAC/24 VDC SITOP PSU (at least 10A)
- 6.10 Power back-up – Siemens SITOP DC UPS 24V (at least 15A)
- 6.11 Battery set – voltage 12V; capacity at least 14Ah; longevity: at least 5 years. The cabinet should come with a battery backup to ensure that the system, in the event of a mains power failure, operates for 12 hours in the supervised state and for 40 minutes in the alarmed state thereafter. We use the following formula to calculate the battery capacity:

$$Q=1,3*[(I_D*T_D) + (I_A*T_A)]$$

where:

$I_D$  – system load in the supervised state,

$T_D$  – required supervision time,

$I_A$  – load on the system in the alarm state,

$T_A$  – required alarm time.

- 6.12 Current control relays – SIEMENS 3UG4622-1AW30 or newer model, 24-230V
- 6.13 Executive relays – RELPOL RMP84-24DC or PIR2 with local control capability
- 6.14 Remote communication (optional) – InVentia telemetry module, MT series
- 6.15 Fibre optic network – SM cable with the following connectors (depending on the device): SC/PC, SC/APC or LC.
- 6.16 The fibre optic PachCords between the distribution cabinet and the chemical alarm cabinets should be in a protective pipe.
- 6.17 Optical and acoustic signalling devices – grey housing, constant yellow optical signal, e.g. WERMA 424 320 75. The signalling devices should be selected according to their installation locations (e.g. factoring in EX zones). In justified cases, after written consultation with the owner of the facilities/installation, it is possible to install optical-flash signalling devices with acoustic signalling.
- 6.18 Sirens – complete box, SS type – DSE 600-1200 with batteries, manufacturer: Digitex. The sirens are to be capable of transmitting voice messages (BARIX Extreamer 100 module or one currently used in the system) and remotely controlling and viewing parameters from the system. Power resulting from measurements or acoustic calculations.
- 6.19 Roadblock indicators – LED Ø300

6.20 Information board – LED characterised by the following parameters: single-colour – red, size – 100x50 cm (+/-10%), resolution – 100x50 px (+/-10%), must be capable of displaying graphics and text. Enclosed by painted protective canopies (colour RAL 7038), depending on the location: aluminium or galvanised.

**7. Design guidelines, acceptance and commissioning:**

- a) Before commencing the project, the Contractor is obliged to obtain confirmation from the Business Owner of the system (Dispatchers' Department at ANWIL S.A.) on the validity of the technical standards in force and/or ones being implemented at the moment.
- b) The design of the box and the communication route set-up must be technically approved by the system maintenance company indicated by ANWIL S.A., with the participation of the ANWIL IT Office, after being approved by the facility/installation owner, the system owner and the Maintenance Services Infrastructure specialist at ANWIL S.A.
- c) We recommend having the design and construction/upgrading of the chemical alarm boxes outsourced to the system maintenance company at ANWIL S.A.
- d) The Contractor's documentation and implementation of the design of the chemical alarm system should be compliant with the Polish state legal provisions and standards. The Contractor will present all the drawings and diagrams of the system on offer and prepare the detailed and as-built documentation. It is vested in the Contractor to prepare the operating documentation, including but not limited to: operating manual; determination of the projected electrical power consumption during the operation of the system on offer; and submission of a list of related devices. The documentation of the Chemical Alarm System provided with the commissioning of the facility must also be provided to the System's Business Owner, that is the Dispatchers' Department at ANWIL S.A.
- e) A draft in Polish is required before the Contractor may commence the performance of the task at hand. Prior to the implementation of the System, the Contractor must necessarily submit the design documentation of the System for consultation and opinion, for its verification and approval by ANWIL S.A. (the owner of the System, the target owner of the facilities/installations being built/upgraded, the relevant services depending on the type of facilities being built/upgraded).
- f) In order to commence the works, it is necessary to obtain the written approval of the project from the future Owner of the facility/installation, the System Owner, Maintenance Services Infrastructure and the relevant services depending on the type of facilities being built/upgraded.
- g) Prior to introducing changes and/or modifications to the Chemical Alarm System, such actions must be reported to: the owner of a specific installation/facility and the Dispatchers' Department at ANWIL S.A.
- h) The fibre optic network for the Chemical Alarm System should be designed with at least two fibres. The connection to the optical fibre network should be marked with labels or tags indicating the purpose of the fibres (according to the guidelines and in consultation with the IT Office of ANWIL S.A.).
- i) The optical, acoustic or optic-acoustic alarms should be installed wherever people are likely to be present (control rooms, control centres, switchboards, production halls, adjacent areas, in the area of technological installations and in production buildings, in corridors of respective floors of administrative and social buildings, in conference rooms, social rooms, cloakrooms, construction sites and their social facilities, etc.). The precise location of these should be consulted with the owner of specific installations/facilities. The signallers must be selected and designed into the system in such a manner as for them to be capable of performing the system functions contained in the section describing the logic of the system and the respective alarm stages. Depending on the installation location, the signalling devices should be resistant to the conditions present there (e.g. Ex area).
- j) The sirens are to be capable of transmitting voice messages (BARIX Extremer 100 module or one currently used in the system) and remotely controlling and viewing parameters from the system. Power resulting from measurements or acoustic calculations. If possible, the siren tubes should be placed as high as possible on the existing infrastructure with easy access for maintenance, for instance: roofs, tanks, flyovers, facades, etc. The siren control boxes should be placed

indoors in readily accessible locations for maintenance, preferably close to the chemical alarm cabinets.

- k) The roadblock lights around the alarm sectors are switched on automatically during the level 1 alarm with a specific sector. The remainder of the traffic lights around the ANWIL premises are controlled in the system by the Company Dispatcher. The roadblock signalling devices signal a red light to block access to a sector and are located behind intersections at the beginning of the road blocked. The roadblock sign posts are compliant with the Regulation of the Polish Minister of Infrastructure dated 3 July 2003 on detailed technical conditions for road signs and signals and road traffic safety devices and the conditions for their placement on roads. Height and strength for mounting the LED board. On the premises of ANWIL, depending on the location: fertiliser zone – anodised aluminium, in other zones: hot-dip galvanised and painted (RAL 7038 colour). Recommended manufacturers: traffic signals – Traffic Lights, LED signs – LED Technology, aluminium poles – ROSA (suitable for traffic signals of the appropriate height for the conditions).
- l) Wiring: the chemical alarm installation is to be performed by using adequate signalling and power cables. The cables used should come with flame-retardant coating. The suggested coating colour is black; the other colours are to be discussed and agreed. Where required by the fire regulations in place, use cables characterised by sufficient fire resistance. Depending on the environmental conditions, the cables should be laid in conduits, PVC strips, metal or PVC cable trays. Detailed guidelines as to how the cables are to be routed (surface mounted/flush mounted) should be agreed with the client during the construction stage.
- m) Grounding: all systems, controls included in the chemical alarm system should be earthed from the power source.
- n) Finish: enclosures of all signalling devices (including the sirens) should be suitable for their surroundings. All outdoor enclosures and junction boxes should be protected against corrosion and painted with weatherproof paints. All devices should come with an enclosure suitable for the prevailing conditions, meeting the relevant IPxx class (dust and waterproof), IKxx mechanical resistance class or be installed in such an enclosure.
- o) Marking: all devices and components should be marked in such a manner as for them to be uniquely identified in line with the design documentation. Cabinets must be labelled according to the numbering in force on the facility premises in the Chemical Alarm System. System nameplates with technological names of the system must be permanently affixed to the devices, and such nameplates as may contain descriptions must be affixed under the optical and acoustic signalling devices. The plate specifications: black "CHEMICAL ALARM" lettering overprinted on yellow background, dimensions 20x10 cm or 10x8cm depending on the size of the rooms. Boxes with cable connections should be placed in readily accessible locations with proper marking. The name of a cabinet consists of 3 elements: the number of the alarm sector in which it is located, the type of cabinet (SW, SP, SS), the consecutive number of the cabinet in a specific sector. (the naming standard should also be maintained for cabinets in the construction back-up facilities, e.g. SP\_ZB1, cabinets for external traffic lights, e.g. JBA01, and battery cabinets, e.g. 1SP13\_AKU).
- p) The equipment used should factor in the potential explosion hazard zone present on at the facility (equipment in a suitable EX design).
- q) We recommend powering the components of the Chemical Alarm System from a guaranteed voltage source.
- r) Upon completing the works, the Contractor should declare readiness for commissioning and connection to the system of the newly built/upgraded node to the System Owner (Dispatchers' Department of ANWIL S.A.).
- s) Upon the notification of readiness, the Contractor is obliged to commission the following works to a company maintaining the System indicated by ANWIL S.A.: programming, connection to the system in operation, preparation of visualisation at the Company Control Station and commissioning of the new system node.

- t) Programming works and changes to the visualisation system of the Chemical Alarm System, for reasons of the safety and reliability of the system, will be performed only by the company indicated by the business owner of the system (Dispatchers' Department of ANWIL S.A.) maintaining the system based on the documentation provided and accepted. The independent performance of works on a separate teletechnical network of the Chemical Alarm System by the Contractor and "third parties" is prohibited. Such works on the separated teletechnical network may be performed only by the maintenance company indicated by ANWIL S.A. with the participation of the IT Office of ANWIL S.A. upon the receipt of such a request from the Contractor. The timing of the activities is determined on a case-by-case basis. The system maintenance company indicated by ANWIL S.A. will update the operating instructions at the Company's Control Station and train the Dispatchers after the works mentioned above are completed.
- u) Prior to the commissioning of the System, the Ordering Party will conduct a mechanical acceptance of the components installed at the facility, confirmed by a report.
- v) Technical acceptance and functional tests: with the approval of authorised representatives of ANWIL S.A., the Contractor will conduct the technical acceptance of the chemical alarm system. The Contractor will check all the devices included in the system, check all the cable connections and verify the correctness of operation with the participation of the Dispatcher of ANWIL S.A. and the system maintenance company indicated by ANWIL S.A.
- w) Electrical commissioning of the system does not imply that the system is fully operational and functional on the premises of ANWIL. After the testing and acceptance, the Contractor must notify ANWIL of its readiness to connect the installation to the entire system. The connection of the entire system can be conducted by the ANWIL IT Office with the participation of the Chemical Alarm System maintenance company. The company maintaining the system, acting on a mandate, has to program the cabinets controllers and perform the visualisation of the newly created or upgraded elements in the SCADA system in the Company Control Room.
- x) Tests and inspection: for all devices, as well as for checking the correct operation of the entire system, the Contractor will conduct standard factory tests and adjustments (if necessary, e.g. volume adjustment of the acoustic signalers). The Contractor will present such reports as may be prepared during the tests and inspections of the equipment to the authorised representatives of ANWIL S.A. The tests must be held with the participation of the Dispatchers' Department of ANWIL S.A. and the system maintenance company indicated by ANWIL S.A. The tests should be conducted on the operation of the cabinet/-s when the warning alarm and level 1 alarm are sounded at the facility. The Contractor should replace defective, damaged or malfunctioning devices of its own accord with fully operational ones; the Contractor should notify the authorised representatives of ANWIL S.A. of the repair and readiness to conduct the functional tests again.
- y) A positive result of the functional tests conducted on the Chemical Alarm System is a prerequisite for starting the process of commissioning the production installations and feeding the hazardous carriers. The commissioning of the system should be evidenced by a written report of the correct operation of the Chemical Alarm System.

## **8. Handling during the guarantee period**

8.1 As non-conformities are found in the operation of the chemical alarm system (malfunctions, defects, etc.) during the guarantee period, the Contractor (guarantor) at all times (24h/7 days a week/365 days a year) undertakes to send qualified technical personnel to repair such non-conformities of the equipment or remove any failures reported by the Ordering Party. The Contractor (guarantor) is obliged to take all necessary actions within 24 hours from the moment such a failure is reported by the Ordering Party and to remove the failure as soon as practicable.

8.2 Guidance and responsibility for maintaining the performance of the system elements:

- At the facilities in possession by ANWIL S.A., all elements connected to the existing System are the property of ANWIL S.A.; the owners of the facilities are responsible for maintaining the full efficiency of the system elements.



- At the facilities not in possession of ANWIL S.A., for the purpose of maintaining the system security, ANWIL owns the system cabinet (SW type) and the cable supplying the system signals to it (it assumes the liability and sustains costs of maintenance and repair of such elements). All the other elements of the system coming out of the cabinet (e.g., optical and acoustic signals, sirens, roadblock lights, cabling and power supply for these elements) are the property of the Owners of the facilities and it is their responsibility to ensure the proper functioning of these elements, as well as to conduct periodic maintenance works and repairs. Recommended path for dealing with the contractor during the guarantee period as for cases where a fault is detected or reported in the elements of the completed System units:

#### 8.3.1 System access and repair (24/7)

- The maintenance company – designated by the Business Owner of the system – must have guaranteed access to the warning signal control cabinets for immediate diagnostic and corrective actions.
- The ANWILS.A. IT Office must provide access to ICT connections.

#### 8.3.2 Recommended treatment during ongoing maintenance and fault occurrence:

- The Dispatcher reports a fault to the system maintenance company indicated by ANWIL S.A.
- The maintenance company must have access to the system elements to diagnose the cause of their fault.
- After the diagnosis, the system maintenance company reports the type of fault to the Dispatcher.
- If the system elements essential for its operation (owned by the Dispatchers' Department of ANWIL S.A.) fail, the maintenance company proceeds immediately to remedy the fault. Once the maintenance company has performed the necessary repairs, the assessed repair costs will be sent to the Dispatchers' and Maintenance Services Departments at ANWIL S.A., which will settle such repairs with the Contractor/Guarantor.
- If the system's executive elements (which are the responsibility of the Facilities/Installation Owners) have malfunctioned, the Dispatcher will notify the Owners concerned of the malfunction. The owner of the facility/installation will have the repair work performed of its own accord having contacted the Guarantor

#### 8.3.3 Mandatory system reviews:

- First Mondays of the month,
- Half-yearly reviews
- Annual reviews

Owners of specific facilities/installations are obliged to conduct the foregoing inspections of their own accord and to provide the Dispatchers' Department of ANWIL S.A. with reports of the inspections performed.

9. **Any deviation from the standards should be justified in writing and approved by the System Owner (Dispatchers' Department at ANWIL S.A.) and the Owners of the facilities/installations on which the respective part of the Chemical Alarm System operates.**