BULGARTRANSGAZ EAD EMERGENCY PLAN

REGARDING: REGIONAL UNIT CHIREN UGS – PART II

YEAR: 2021 Revised

APPROVED BY: VLADIMIR MALINOV, [signature]

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No	Changes that took place	Signature

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BULGARTRANSGAZ EAD EMERGENCY PLAN
REGARDING: REGIONAL UNIT CHIREN UGS – PART II
Year: 2021 - Revised

TABLE OF CONTENTS:

BULGARTRANSGAZ EAD EMERGENCY PLAN
REGARDING: REGIONAL UNIT CHIREN UGS – PART II
Year: 2021 - Revised

SECTION I

Introduction

1. Basis for developing the plan

The Emergency Plan has been prepared pursuant to the requirements of Article 14 in connection with Article 1(1)(5) of the Ordinance on the Prevention of Major Accidents with Hazardous Substances and the Limitation of their Consequences (promulgated SG, No. 5 of 19 January 2016) and Article 107(1)(3) of EPA in a form and content in accordance with Appendix 5 to Article 14 and Article 18(1) thereof. This document has been updated in accordance with the latest amendments and additions in Chapter Seven, Section I of the EPA (promulgated, SG, issue 91 of 25.09.2002) and "Ordinance on the Prevention of Major Accidents with Dangerous Substances and the Limitation of Their Consequences".

The plan is also consistent with the requirements of the following documents:

- П-БТГ procedure "Emergency preparedness and response capability";
- Art. 35, para. 1, of the Disaster Protection Act (promulgated SG, issue 102 of 19.12.2006) and subsequent amendments (see Part I);
- 2021-2025 National Disaster Risk Reduction Strategy;
- 2017 National Counter-Terrorism Plan;
- Article 20(1) of the Occupational Health and Safety Act (promulgated SG, issue 124 of 1997) and subsequent amendments;
- Article 248 of "Ordinance No 7 on the minimum requirements for healthy and safe working conditions at workplaces and when using work equipment" (promulgated SG, issue 88 of 1999) and subsequent amendments;
- Act on protection from the harmful impact of chemical substances and mixtures (promulgated SG, issue 10 of 2000) and subsequent amendments;
- Article 4, item 12 of the "Ordinance on the order and manner of storage of hazardous chemical substances and mixtures" (promulgated SG 43 of 7 June 2011);
- Article 107, para. 1, and para. 5 of the Environmental Protection Act (promulgated SG, issue 91 of 25.09.2002) and subsequent amendments;
- Article 131, para. 1 of the Water Act (promulgated SG, issue 67 of 27.07.1999) and subsequent amendments;
- ORDINANCE on the procedure for the creation, storage, renovation, maintenance, provision and reporting of stocks of individual means of protection" (promulgated, SG No. 5 of 20 January 2009);
- ORDINANCE on emergency planning and emergency preparedness in the event of a nuclear and radiation accident (promulgated, SG No. 94 of 29.11.2011) and subsequent amendments;
- Ordinance No 5 / 11.05.1999 on the procedure, manner and frequency of carrying out risk assessments" (promulgated SG No. 47 of 21 May 1999);
- Article 6, para. 1, 2 and 3 of Ordinance No 8121_3-647 on the rules and norms for fire safety in the operation of the industrial sites" (promulgated SG No. 89 of 28 October 2014);
- Article 281 and Article 282 of the Ordinance on the Structure and Safe Operation of Transmission and Distribution Gas Pipelines, Facilities, Installations and Appliances for Natural Gas (promulgated SG, issue 63 of 02.08.2004) and subsequent amendments;

2. Objectives of the plan

The internal emergency plan adopted by the company shall be drawn up in order to achieve a high level of protection of human life and health and the environment by:

1. Ensuring control and limitation of the consequences from accidents so as to minimize their impact and limit the adverse effects on human health, the environment and material property;

2. Implementation of measures necessary to protect human health and the environment from the effects of major accidents;

3. Communicate the necessary information to the public and ensure effective communication between the competent authorities and the operator;

4. Ensuring the restoration and cleaning of the environment around the plant and/or facility after a major accident.

The objectives thus set are to be achieved by:

- Creating an optimal organisation for taking measures to protect people's life and health, the environment and for identifying the necessary actions of the management bodies and forces to respond to expected crises caused by disasters, accidents and fires;
- Creating an organisation to take measures to combat natural disasters, incidents and major industrial accidents, to protect people's lives and material property and ensure trouble-free operation of the facilities;
- Organisational and technical support of the activities;
- Creating an organization for the timely forecasting and analysing the nature and consequences of the most frequent disasters or emergency situations;
- Implementation of preventive measures and preventive control to counter or reduce the consequences from disasters, accidents and fires on the territory of the gas storage facility;
- Introducing the European standards and best available techniques for local risk assessment;
- Allocation of the responsibilities and the authorities and persons responsible for implementing the measures envisaged;
- Planning of funds and resources for the prevention and elimination of the consequences from accidents;
- Performing organisation of the work and actions of the management and staff in the event of disasters, accidents and fires, threatening their life and health after assessing the situation, the circumstances and their category;
- Identification of measures to reduce the dangers in the event of major accidents and fires.
- Preserving the life and health of the personnel and ensuring the restoration and cleaning of the environment around the plant and/or facility after a major accident.

3. Main tasks of the plan

3.1. Development and maintenance of an Emergency Plan of the company;

3.2. Immediate notification of the company's management in a crisis situation and destroyed facilities (wells, gas pipelines, installations and facilities, power lines and water pipelines).

3.3. Providing due information in the event of a crisis situation:

- 24/7 - Single European emergency number - duty staff at 112;

- 24/7 - Fire Safety and Protection of the Population Regional office at:

092/661 035; 0893 612 066;

- 24/7 –duty staff at the Municipal Headquarters for Coordination:

the town of Vratsa at: 092/623 000 and 092/624 603;

the town of Krivodol at: 0879/396926; 09117/2530.

- 24/7 – duty staff at the Coordination District Unit - Vratsa at:

092/621 172

- GREEN PHONE of the Regional Environment and Water Inspection - Vratsa for reporting environmental pollution

telehone: (092) 629 211 (from 9:00 a.m. to 5:30 p.m. every working day);

telephone: 0893 393 185 (during off-hours).

- In case of terrorist act: Coordination centre of the State Agency for National Security – 02/8147069 or 02/8147125.

3.4. Restricting the access of people to the affected area, redirecting the traffic by detour routes.

3.5. Taking immediate measures to protect staff and visitors on site.

3.6. Making arrangements for prompt identification, removal and first aid of casualties.

3.7. Timely announcement and, if necessary, evacuation of workers and employees caught in the pollution zone;

3.8. Providing individual means of protection and creating an organisation for transportation in the shortest possible time.

3.9. Providing the necessary protective equipment and its adjustment.

3.10. Introduction of strict control to prevent the contamination of food, water, environmental components and compliance with sanitary and hygienic requirements;

4. Organisation and implementation of the plan.

This plan is updated with the direct participation of the Headquarters for coordination of the actions of the staff of Bulgartransgaz EAD – Chiren UGS in the event of critical situations.

It regulates the organisation, functions and tasks of the officials, as well as the interaction with the Emergency Plan for the protection of the personnel in case of disasters and accidents at the Central Directorate of Bulgartransgaz EAD, the Municipal Council of Bulgartransgaz EAD, the Contingency Plan and the units of the Unified National Rescue System (Unified National Rescue System (Fire Safety and Civil Protection Directorate General – Ministry of Interior and the Emergency Assistance Centre) to ensure the measures necessary to eliminate the consequences, disasters, accidents and fires.

5. Maintaining emergency preparedness

The staff, and in particular the personnel of the emergency groups, shall be familiar with the plan and shall undergo annual training and examination of the acquired knowledge as per the Ordinance on the Structure and Safe Operation of Transmission and Distribution Gas Pipelines, Facilities, Installations and Appliances. Periodically, training events are prepared and carried out

to simulate the actions of workers in the event of disasters, accidents and catastrophes.

In order to reduce the risk of disasters, accidents and accidents, the company must:

- To exercise ongoing control over the operation of the gas storage, the CS, the pigging and other facilities and take in time the necessary measures for their normal operation in accordance with the current legislation (instructions, regulations, etc.);
- Check of the condition and operation of the methanol units installed on problematic wells.
- Maintenance in full readiness of the available off-road vehicles, heavy machinery, units and other equipment with a view to their use, where/when necessary;
- Keeping a permanent reserve of functioning electric motors, pumps, nitrogen, oxygen, propane-butane containers and others;
- Organising briefings of the staff on duty at all work sites on the critical situations, at low (high) temperatures and degraded weather conditions;
- Annual replay and drills should be carried out in order to maintain a state of preparedness to respond, in the event of emergency situations, in accordance with an annual schedule for conducting emergency and fire drills.
- In order to maintain the state of readiness and responsiveness of the company in general and the responsible individuals and structures in particular, Bulgartransgaz EAD plans and conducts training and evacuations drills with simulations of emergencies.

All trainings and drills are planned in the Annual Schedule of Emergency and Fire Drills of Bulgartransgaz EAD and a protocol is drawn up for each such drill/training (see **Appendix No. 9).**

BULGARTRANSGAZ EAD EMERGENCY PLAN
REGARDING: REGIONAL UNIT CHIREN UGS – PART II
Year: 2021 - Revised

SECTION II

Storage Facility Internal Emergency Plan

prepared in accordance with Appendix 5 to Art. 14 and Art. 18 of the Ordinance on the Prevention of Major Accidents with Dangerous Substances and the Limitation of Their Consequences (promulgated, SG 5 of 19.01.2016)

1. The names or positions of the individuals empowered to implement the emergency plan and the names of the individual(s) responsible for coordinating the actions to be taken on the premises of the company/facility in the event of an emergency are:

1. Dipl. Eng. Angel Ivanov Konov - Head, RU Chiren UGS;

2. Dipl. Eng. Plamen Filipov Petkov - Head of Department Instrumentation Control and Automation

The obligations of these officials are:

- To introduce the internal emergency plan of the site in the event of an emergency;
- To establish an organisation for conducting emergency rescue works;
- To distribute duties and plan the actions of individuals, services and bodies involved in the emergency rescue operations.

2. The name and the official position of the individual responsible for liaising with the mayor of the municipality and the disaster protection authorities responsible for the implementation of the external emergency plan.

1. Plamen Filipov Petkov - Head of Department Control and Automation

In case of the unavailability of the official person, its obligations will be taken over by:

2. The dispatcher on duty at Regional Dispatching Office Chiren UGS.

The obligations of the official are:

- Provides information to the mayor of the municipality and disaster protection authorities responsible for implementing the external emergency plan;
- Assists the head of the Headquarters for the implementation of the emergency plan in informing the public and ensuring connections with mass media.

3. Planned actions to control the risk of major accidents and to limit the consequences from them under foreseeable conditions or events which may lead to the occurrence of a major accident, including a description of equipment ensuring safe operation and available resources, including individual and collective means of protection.

3.1. The identified major dangers for the Chiren gas storage facility

3.1.1. Earthquakes

An earthquake is one of the most dangerous and unpredictable natural disaster. It occurs as a result of underground shocks (thrusts) and displacements of the Earth's crust caused by existing tensions deep underground. Modern science divides these tensions into two types: all-round compressive stresses induced by the pressure of top lying layers, and system stresses accompanied by compressive force and perpendicular tensile forces. Under the influence of these stresses in the bowels of the earth, the layers bend and compressive energy accumulates in them, which when released causing these layers to shift.

The territory of Chiren UGS falls into a seismic zone of secondary importance, where maximum earthquakes are expected up to IV-th degree on the Richter scale. The buildings and facilities are provided structurally for earthquakes up to the ninth degree on the EM5-98 scale. At a higher degree, damage and destruction are expected to occur. As a result of ground`s displacement, it is possible to deform and rupture the gas pipelines which would lead to a time-limited leakage of natural gas into the atmosphere and the risk of explosions and fires, possibly accompanied by human casualties. The power supply system is likely to be disrupted. Failures in the communication system and interruption of technological and communication connections will also occur.

In the event of an accident caused by an earthquake, it is possible (depending on its power) to witness some destruction of the buildings, the water supply and electricity. Power supply to the site. It is possible that in the event of very powerful earthquakes there will be a rupture of gas pipelines.

3.1.2. Fires

Fires may occur as a result of a combination of accidental or natural phenomena: rupture of the pipeline, gaps of natural gas from taps of the fountain armature of boreholes and facilities, accompanied by an ignition spark arising from technological processes (heated surfaces, electric arcs or sparks, electrostatic discharge, mechanical friction or spark on impact, optical effects, open fire, etc.), and also during massive wildfires.

The results of the performed risk assessment indicate that a fire may also occur as a result of non-compliance with safety rules when carrying out hot works in temporary locations (e.g., cuts into gas pipelines, repairs, etc.), unauthorised use of open fire, smoking, etc.

Most often, the fire is asymmetrical. It spreads along the direction of the wind; from the low to the higher parts of a slope or elevation.

There are three main scenarios for leakage and ignition of natural gas as a result of an accident or a breakdown:

- formation of small diffusion gas torches (with a small amount of leaking gas), the combustion of which ceases immediately after interruption of the gas flow;

- formation of large high temperature diffusion gas torches impacting the surrounding objects by emitting thermal radiation or by way of an immediate contact;

- formation of large gas/air clouds, the ignition of which may be accompanied by the occurrence of shock waves.

The risk of an explosion from an open natural gas leak is minimal, but consideration should be given to possible natural or artificial barriers or specific climatic conditions that could temporarily limit the rapid dispersion of the gas into the atmosphere.

The development of an accident with the discharge of natural gas from a broken gas pipeline or process equipment, as a rule is reduced to the following: as a result of a product leak, a combustible gas-air cloud is formed. As a result of a product leak, a combustible gas-air cloud can be formed. The occurrence of an ignition source in the area of the cloud with a concentration of combustible gas above the lower and below the upper ignition limit leads to ignition of the gas-air mixture. Depending on the combustible gas leakage regime, the conditions for its mixing with air and the conditions of ignition the combustion process of the cloud may develop in a number of different ways.

One of the most severe situations is the occurrence of a scattered torch, formed by the destruction of structures and congestion at the site of gas leakage. This torch is characterized by a high resistance, a highly developed combustion surface and a high degree of thermal radiation.

A characteristic feature of torch combustion is its duration over time. In this case, the surrounding objects find themselves in the zone of thermal radiation, which can cause secondary fires which requires the immediate need to protect people and limit the time of their stay in the zone of increased thermal radiation.

The expected damage to settlements, production sites, etc., as a result of emergency situations have been minimized: the routes of the gas pipelines and the main sites are located in undeveloped areas after observing the required distances for safety easement zones (according to the Energy Act and the related bylaws). Secondary fires in agricultural and forest areas are more likely.

3.1.3. Floods

A flood is a temporary flooding of a significant part of the land with water. It is a natural disaster that is somewhat predictable. It can be caused both by the action of natural forces (heavy continuous rainfall, abundant snowmelt) and as a result of an accident in hydrotechnical facilities (dam walls, protective dykes).

The potential danger for the operation at Chiren UGS is the rupture of the Chiren III dam which can cause the flooding of the pumping industrial water zone for the compressor workshop which, on its part, will temporarily suspend the discharge process.

The likely consequences of a flood or river current impact at a site where there are facilities are: interruption of a gas pipeline, disclosure of a section of the pipeline with damage to the protective cover of the pipe, cutting off of communications and / or electricity supply for the facilities and their subsequent failure, termination or limitation of the supply of natural gas to the gas transmission network and interruption of the technological and communication connections.

3.1.4. Industrial accidents involving flammable and/or toxic substances:

Incidents related to the discharge of hazardous chemicals can occur as a result of industrial accidents, disasters, terrorist activities.

On the territory of Bulgartransgaz EAD - Chiren UGS production accidents may occur related to the use of hazardous chemicals: methanol, gas condensate, gasoline, diesel fuel, natural gas.

A technological accident in the area of the gas storage can also occur during gas extraction and injection. When gas is injected, a high gas concentration level in the compressor workshop room can occur. Depending on the concentration of gas in the air, a suffocating or explosive mixture may be formed.

Other prerequisites for incidents/accidents on a network of gas gatherings and other facilities of the system:

- ruptures due to corrosion of the material. In order to reduce the risk of this type of accident, both active (electrochemical) and passive (via the insulation) protection of the equipment from corrosion is built. Inspections of the network of gathering network are periodically carried out (every 10 years tests with a pressure of 1.25 above the working pressure) and the CS are carried out, in which the presence of problematic areas along the routes is detected and their location marked. Every month the electrical-cathodic potential is being measured.

- ruptures due to poor quality welding. To minimize the risk, all welding joints are subjected to non-destructive testing.

- equipment (facility) failures. Planned repairs, maintenance and inspections are carried out in accordance with the requirements of the Ordinance on the Structure and Safe Operation of Transmission and Distribution Gas Pipelines, Facilities, Installations and Appliances for Natural Gas and the internal normative documents (instructions, regulations, etc.)

- violation of the integrity of the facilities caused by third parties. The most common reason for this is unregulated excavation works or malicious acts.

3.1.5. Terrorist acts

A terrorist act on the facilities and installations could also cause a major accident. In the event of a terrorist act, it is possible to tear the gas pipelines or installations and cause fires:

- sabotage on the facilities, sites and installations, which may lead to accidents with gas leakage and ignition, injured people, material losses, disruption of gas supply to consumers;

- cyberattacks aimed at blocking the operation of computer systems or unauthorized access to retrieve business information or by blocking the automation and information connectivity.

In case of terrorist activity on the territory of the facilities operated by Bulgartransgaz EAD - Chiren UGS, it is possible to witness the following consequences:

- The greatest possible danger can occur in the event of:

- blowout of an exploitation well. Well plugging in such a case is a lengthy and difficult job. Large quantities of natural gas from the underground gas storage will be lost. There is a risk of: explosion; flaring;

- destruction - complete or partial destruction of the compressor workshop or of the new compressors (GTCUs) - there is a risk of: explosion; flaring;

- accident in the gas dehydration plant and the real danger of the occurrence: flaring; explosion;

- accident/leakage of methanol tank - there is a danger of the occurrence of: toxic spills; pool fire; fireball.

- In the above accidents, high gas concentration levels will occur within different territories (mostly during a blowout of an exploitation well) with the resulting explosive mixture and all of the dangerous consequences.

- In case of disruption of the electricity supply, an emergency gas unit is in place, but in certain situations it is possible to interrupt the production activity during the injection and withdrawal of natural gas.
- The demolition of the wall of the dam, the leakage of water or the demolition of the pumping facility or the water pipeline will be followed by a serious disruption of the production rhythm, including stop in the operations during the injection season.

Major accidents can also occur as a result of the gross non-compliance with the enforced technological discipline.

After a thorough investigation of the production processes and technologies, the machines and the equipment, a risk assessment and mathematical modelling of the distribution of the various types of harmful effects which could occur at Chiren UGS have been prepared, the main conclusions of which are a part of the company's Safety Report.

3.1.6. Accident occurrence scenarios. Possible major accidents at Chiren UGS.

The possible major accidents on the territory of the Chiren UGS are:

- **Scenario 1 – accidents involving natural gas:**

- well accidents with the resulting consequences- explosion, flaring;
- accident with a gathering - flaring;
- accident with the gas connections of the compressors - explosion, flaring;
- accidents in the gas dehydration plant - explosion, flaring;

- **Scenario 2 – accidents involving methanol:**

- ruptures in tanks containing methanol and dissipation of toxic chemicals;
- ruptures in tanks containing methanol and pool fires;
- ruptures in tank containing methanol and formation of fireballs.

The analysis of the occurrence, development and consequences from possible accidents at the Chiren UGS allows us to determine the following main characteristic features:

<u>Scenario 1:</u>

- Occurrence of accidents can be expected at wells sites, along the length of gatherings and at the UGS site;
- Accidents are primarily related to natural gas leaks. Being lighter than air, natural gas will rise in height quickly and dissipate, therefore there is no danger of gas concentration level building up, except indoors;
- Due to the high pressure of natural gas, the depressurization of pipelines and facilities will, in most cases, take the form of a physical explosion, accompanied by the formation and propagation of a shock wave. In most cases, the area of action of the shock wave is limited to 10-20 m around the rupture site and does not pose a danger to people outside of this zone;
- The seismic impact from an explosive rupture of the underground part of gatherings is too limited and does not pose a danger to nearby sites/facilities;
- Due to the properties of natural gas, mentioned above, the occurrence of detonation type combustion and/or fireball type combustion when depressurizing outdoor facilities cannot be expected;

- Detonation combustion can be expected when depressurizing the facilities in the compressor workshop or the new compressors (GTCUs), or a rupture in the natural gas pipeline from the absorption column;
- In case of depressurization of the facilities and leakage of gas from them, flaring can be expected at the location of the leakage - a serious danger in the ignition of the flare exists for people located at a distance of less than 22 m in the event of a well accident, 56 m in the event of an accident in the gas connections of compressors and less than 102 m from the depressurization of the natural gas pipeline to the absorption column;
- The products from natural gas combustion are carbon dioxide and water vapour. They are not particularly toxic and cannot pose a threat to the life and health of both nearby people and the people from settlements close to the UGS. The effect from carbon dioxide on people is expressed as dizziness, headache, increased blood pressure, and tachycardia. This gas is lighter than air and under normal conditions accumulates at the ceiling of the premises. High concentrations in the air lead to oxygen deficiency and possible loss of consciousness. During a fire - and because of the high temperature of the combustion products - carbon dioxide rises in height and quickly dilutes into the ambient air.

Scenario 2:

- In the case of a rupture of a methanol tank (*existing highly flammable liquids warehouse*, with a volume of 250 m^3 or a new tank located on the extension of the production site, with a volume of 30 m^3) with a subsequent pool fire, a danger to the life and health of people exists within a radius of 25 m from the tanks and probably discomfort to people in the open air – located at up to 37 m away;
- In the case of a fireball from a methanol tank (existing with a volume of 250 m^3 or a new *one with a volume of 30* m^3), a danger to the life and health of people exists within a radius of 344 m from the existing tank and 156 m from the new tank. Within the boundaries of the zone where there may be injuries to the people outdoors there is a third-class road connecting the villages of Chiren and Devene;
- When a methanol tank is ruptured (existing with a volume of 250 m^3 *or a new one with a volume of 30* m^3), accompanied by toxic dissipation (*i.e., lack of conditions for the occurrence of fire*), the areas of danger are negligibly small due to the small amount of the low toxic liquid (*methanol*) involved in the accident;
- The analysis of the risk of poisoning people with the substances used in UGS shows that the danger is minimal. Danger of poisoning can only occur in an emergency gas leak in a compressor workshop and in a spillage from the methanol tanks, but only in an extremely limited area around the spill. For the other workers on the site of the UGS, as well as for people and animals in the neighbouring settlements, the danger of poisoning from accidents on the territory of the UGS does not exist.

The boundaries of a safe zone around the company are depicted on a map material in Appendix No. 11 hereto.

3.2. Operational control and management of the technological processes

In Bulgartransgaz EAD, Chiren UGS, production instructions based on the technical documentation and the instructions for the installation and safe operation of the relevant installations and facilities have been created. They define the duties of the staff in the daily operation and maintenance of the machines and equipment, processes and apparatus, the safe performance of technological operations, the obligations under abnormal and transitional modes of operation or violation of the technological regime as well as the actions in the event of emergency situations. The instructions

are developed, introduced and updated in accordance with the internal procedure **П-БТГ Document Management**, using standardized forms.

The duty of the technical staff at Chiren UGS is continuous control over the facilities and installations, which is regulated in the job descriptions of the individual posts and by the relevant orders and internal departmental instructions, procedures, plans and programs.

In order to assess the technical condition of the wells at Chiren UGS, inspections and technical maintenance are planned and conducted. Continuous monitoring of the technological parameters of the wells is carried out.

Periodic tests of the fire and fire alarm system shall be carried out, as well as lightning protection measurements by accredited laboratories.

Continuous monitoring of the operating personnel for compliance with the technological regime shall be carried out on the production facilities, machines and apparatus, which shall be reflected in the relevant technical documentation. Periodic technical supervision is carried out on high-risk facilities by licensed individuals in accordance with the current legislation.

Bulgartransgaz EAD has developed and applies the **procedure П-БТГ Operational Occupational Health and Safety Management**, which regulates the order and responsibilities for exercising control over the activities related to ensuring health and safety at work.

In accordance with the regulations of the procedure, work is carried out in the following directions:

- providing the necessary organizational safety measures in the implementation of activities with increased risk, in particular:

- gas-hazardous works;

- hot works;

- use of electrical equipment and power installations;

- other activities.

- control of the implementation of safety measures by its own and the subcontractors' staff;

- control of the condition of the work equipment and facilities, including:

- high-risk equipment;

- hauling accessories;

- hand operated tools;

- personal protective equipment, collective protective equipment and work clothing;

- firefighting facilities and equipment;

- other facilities, equipment and tools.

In order to ensure the necessary control of the purchased materials, machines and protective equipment, the procedure **П-БТГ Entry Control and Warehousing** has been established, regulating the order and responsibilities for control over the receipt of materials in the warehouses of the company and directly at the worksites and before their acceptance for use.

For the safe execution of work operations, assessed as tasks of increased risk, the company develops, approves and observes instructions on health and safety at work as well as technological and operational instructions. In accordance with the identified hazards and the assessed risks to the health and safety of the staff, as well as in accordance with the regulatory requirements it is determined exactly which of the working operations and facilities are covered by additional written

regulations and are necessary for the employer to ensure the reduction or prevention of occupational risks to the staff.

The performance of tasks with increased risk shall be assigned only to individuals qualified within the meaning of the relevant normative acts. Before performing tasks of increased risk, the necessary organisational safety measures, required by the relevant regulations, including the issuance of assignments and orders, shall be taken.

The activities with increased risk covered by the procedure are:

Gas-hazardous works - when carrying them out, the requirements of the Ordinance on the Structure and Safe Operation of Transmission and Distribution Gas Pipelines and Facilities, Installations and Appliances for Natural Gas shall be observed;

Hot works - they comply with the requirements of Ordinance 8121z-647 of 01.10.2014 on the rules and norms for Fire Safety in Operation of Sites, Chapter Five;

Operation of electrical equipment and electrical equipment - requirements for work are in accordance: Operation of electrical machines and equipment - the work requirements are in accordance with the Regulations for safety and health at working with electrical equipment at voltages of up to 1000 V; Regulations for safety and health at work in electrical installations, district heating plants and electrical networks.

List of materials, tools and inventory necessary to carry out repair and restoration works - equipping the emergency teams with the necessary equipment to carry out the urgent emergency and recovery works is according to (Appendix No. 6**)**.

Other activities - this includes transport service activities, activities carried out in workshops, offices, warehouses and other premises and sites. For each type of activity there is a risk assessment in place as well as instructions on health and safety at work, and the staff has the necessary qualifications and preparation for their implementation.

The procedure also regulates current and periodic control of:

- **High-risk facilities -** the following groups of high-risk equipment are used in the company: *Main technological facilities* - gas pipelines, compressor stations, gas regulating stations, wells, etc.;

Pressure equipment - pressurized vessels, boilers, compressors, etc;

Lifting equipment - cranes, hoists, etc.

In addition, according to Article 281 (3) of the Labour Code, lists of high-risk facilities and activities have been drawn up, covering the entire territory of the company.

- **Lifting/hoisting accessories;**
- **Manual electrical power tools;**
- **Personal protective equipment, collective protective equipment and work clothing;**
- **Firefighting facilities and equipment;**
- **Other facilities, equipment and tools.**

The safe management of the technological processes in Bulgartransgaz EAD, Chiren UGS is guaranteed both by the level of the technological and technical solutions set at the design stage, as well as by the qualities for the machines and materials, facilities, pipeline networks and

materials used. When exiting the normal mode of operation of a piece of equipment or installation, the same is excluded from operation.

All measures have been taken to meet the requirements set out in Chapter eight of the Ordinance on the Structure and Safe Operation of Transmission and Distribution Gas Pipelines, Facilities, Installations and Appliances concerning the requirements for the safe operation of industrial gas facilities and installations.

During operation, periodic monitoring of the pipeline, the gas facility or the industrial gas installation by its service individuals is carried out. The service personnel is obligated to know and comply with the requirements of the ordinance, the production instruction and the manufacturer's instructions for operation, maintenance and repair.

Readings of the technological parameters from the meters of the pipeline, gas facility or the industrial gas installation shall be recorded in the operator's shift logbook.

The maintenance personnel shall periodically inspect the pipeline, gas facility (combustion system) or the installation and shall inspect them, in accordance with the instruction manual, for:

✓ gas leaks;

✓ the condition of the fittings, gaskets, flanges and threaded joints, safety devices, instrumentation and the gas pipeline supports and uprights;

✓ the density of the welding, threaded and flanged joints;

✓ the correct operation of the working pressure gauges and safety devices;

✓ the deficiencies found during the inspections shall be recorded in the shift log and communicated to the direct manager;

The service personnel shall immediately suspend the operation of the pipeline, gas facility, fuel system or gas appliance:

✓ when the pressure or temperature in them rises above the permissible values;

✓ when bulges, cracks or gaps are found in the pressure components;

✓ in case of fire and natural disasters;

✓ in all other cases specified in the manufacturing instructions.

Safe and trouble-free operation and maintenance is provided in accordance with the technical requirements of the Ordinance, the norms and rules for fire and emergency safety and the related technical documentation.

Effective control of the operation of gas pipelines and gas facilities and industrial gas installations and service personnel is ensured.

Technical files of each gas pipeline, gas facility and/or industrial gas installation have been compiled and stored, containing their technical documentation, drawings, calculations and repair documents as well as all documents issued by the technical surveillance authorities.

There is an audit book for each gas pipeline, gas facility, industrial gas installation and/or gas appliance, in which the technical supervision bodies record the results from the supervisory activities carried out, as well as the prescriptions for removal of established violations.

The prescriptions given by the technical supervision organs and the specialized state control authorities are fulfilled.

A special order designates the individuals who represent Chiren UGS before the technical supervisory authorities in carrying out inspections of the enterprise or technical inspections of the gas facilities and installations.

The initial instruction upon staff employment and periodic for each quarter, extraordinary and annual verification of the knowledge of the individuals about the structure and requirements for safe operation of the gas pipelines and gas facilities and industrial gas installations shall be provided and documented.

There are signs with instructions for safe use of gas pipelines and gas facilities and industrial gas installations placed where necessary as well as signs for safe working conditions according to Ordinance 07-8 / 20.12.2008 on the Signs and signals for occupational safety and fire protection.

Regardless of the periodic technical inspections carried out by the technical supervision bodies, an external technical inspection of the pipeline, the gas facility or installation shall be carried out at least once a year.

Metrological control of the pressure gauges, by which the pressure in these facilities is controlled, shall be carried out under the Ordinance on Measuring Instruments Subject to Metrological Control (SG No. 98 of 2003).

Verification of the operation and adjustment of safety valves installed on the gas pipelines, gas facilities, gas installations and the combustion systems is provided at least once every 12 months.

At least once every 12 months, the operation and adjustment of natural gas detectors shall be checked.

Special sparkless tools and equipment are provided for working in explosive environments as well as the adequate individual protective equipment.

The following fire extinguishers are provided for extinguishing fires: hoses, hydrants, nozzles; powder, waterproof, and CO_2 fire extinguishers; gas masks; fire blankets. Fire and fire alarm equipment are maintained in good working order and periodic inspections are carried out by a licensed company.

Gas alarm and ventilation systems shall be maintained in continuous working order. In order to maintain the theoretical and practical knowledge of the operating staff, regular practical exercises and drills are carried out.

A telemetry information system has been put into operation at Chiren UGS, transferring technical data on the overall status as well as from the mouth of each well. This information is monitored by the dispatchers on duty around the clock in the dispatch room, as well as by the direct managers involved in the production process. This information can be stored and visualized on the information system in the General Dispatching Division at the headquarters in the city of Sofia.

The information dispatch system WPS32 is a software application providing operational data on the main technological parameters from the Chiren UGS site. The application is an outsourced terminal station connected to the information dispatch system of Bulgartransgaz - Sofia. The system includes all areas controlled the company. The dispatching information system at Chiren UGS collects directly local users, which are measured by electronic corrective devices. The rest of data that enters the system is integrated by the local SCADA system at Chiren UGS.

A study of the technical condition of wells has been carried out throughout the period of cyclical operation of the gas storage facility. In the process of withdrawal and injection of natural gas in Chiren UGS, the operating columns of the wells and the cement ring behind them are subjected to the effects of changing pressure. This creates conditions for the deterioration of the technical condition of the operational casings and their tightness. Gas migration through annulus and well

casings is possible, and in some conditions gas accumulation in shallower horizons. To control these processes and to monitor the level of the water gas contact in the reservoir, well logging measurements are carried out. Research is being carried out to assess the wells productivity. The safe and environmentally friendly operation of the gas storage requires sampling and analysis of formation fluids from different depths in the observation wells. In addition, projects for the insulation, repair and restoration works of the wells are implemented through the application of modern technologies.

Documented procedures and instructions relating to the management of technological processes and practices for safe work are prepared, modified, coordinated, validated, registered, distributed, preserved, destroyed and archived in accordance with the procedure described in procedures **П-БТГ Document Management** and **ППИ-16-БТГ-АД Rules for the activity of archives**.

The process of managing the documented procedures ensures:

- Involvement of the staff required to implement them;
- Adequacy of the changing circumstances; timeliness;
- Accessibility for the personnel directly or indirectly responsible for the operation and maintenance works.

3.3. Description of technical parameters and the equipment used for guaranteeing safe operation

The design of the buildings, facilities and installations takes into account the seismic characteristics of the area.

All facilities and installations on the territory of Chiren UGS are designed and built to meet the requirements of the Ordinance on the Structure and Safe Operation of Transmission and Distribution Gas Pipelines, Facilities, Installations and Appliances for Natural Gas. At the dispatching room, where 24-hour duty is provided, the shift manager monitors the operation of all facilities and installations through the information system built and put into operation. It is integrated in the existing information system WPS 32 in Bulgartransgaz EAD, which enables the dispatchers in the company's General Dispatching Division (GDD - Sofia) to monitor the operation of the facilities and installations in Chiren UGS.

All facilities and installations on the UGS territory are equipped with safety fittings. The pipelines are designed and implemented to ensure safe operation and controlled gas release during repairs. The pipes have a wall thickness sufficient to absorb the internal gas pressures and the expected external pressures and loads to which the pipeline will be subjected in its operation. Gas pipelines, depending on the operating conditions, are checked for taking the tensions from: internal pressure; anchoring or backfilling; the pressure during the test of the pipeline and the load from the mass of water; settlement; soil swelling due to frost; load from landslide processes; seismic load for the area concerned; thermal expansion; soil erosion, etc.

The steel gas pipelines, their chemical composition and mechanical characteristics, the initial determination of the wall thickness of pipes, the design pressure and the maximum design coefficient for internal pressure are determined according to BDS EN 1594.

In 2004, well E-70 was commissioned, in 2008 - well E-71, in 2016 - well E-72, and in 2017 - well E-73. In addition to their different structures compared to the structures built so far, these wells are also distinguished by a new type of fountain and underground equipment, providing interruption of the gas flow in case of fire. An underground safety valve is included in the

composition of the operating lift, which stops the flow of gas to the surface when the mouth of the well is destroyed in emergency situations.

In 2003 the then existing substation (built and equipped in the early 1980`s as a 20 kV РУ) was completely reconstructed. Complex switchgear - 20 kV and switchgear - 0.4 kV were built, with the equipment being supplied by Merlin Gerin. The equipment as well as the installed transformers do not contain polychlorinated biphenyls (PCBs). The list of inventory equipment has been checked and certified by RIEW – Vratsa. An automatic incorporation of the reserve has been built at 20 kV and at 0.4 kV. The bus system from transformers to 0.4 kV switchgear is of the closed type. Programmatic, electrical and mechanical interlocks are installed to prevent unauthorized switching, which ensures the security of the service personnel. The switch from operating to backup power is done in about 4 seconds. In the switchgear- 0.4 kV is provided programmatically with automatic switching on of an emergency gas unit in case the electrical unit fails from both power transmission lines.

The emergency gas unit is designed to provide the necessary electricity to existing installations in the event of emergency situations where the voltage to the Chiren UGS site will drop.

Tests are held on the individual protective equipment, lightning protection and the protective grounding measurements, phase - protective conductor contour are carried out by an accredited laboratory, which is certified by the relevant control certificates.

The service of the electrical facilities are carried out in strict compliance with the requirements of:

1. Rules for Health and Safety at Work when performing works on electrical equipment with voltage up to 1000 V, promulgated, SG No. 21 of 11 March 2005).

2. Rules for safety and health at work with electrical systems of electrical and heating plants and on electrical networks (promulgated, SG No. 34 of 27 April 2004 effective as of 28 August 2005).

Explosion-proof emergency lighting was built in the compressor workshop. An installation with EX terminals of 24V for explosion-proof mobile lamps used in examinations and repairs of the machines has been built. In the administrative building and the garages are designed and built lighting and power installations. All contacts are connected to current circuits with defective current protections set for a current of up to 30 mA. In this way, the risk of accidents in case of damages to the electrical power plant is significantly reduced.

All equipment, installations and gas pipelines are marked with permanent signs (license plates, working pressure, pressure of which the safety fittings are activated, etc.). The well sites, crane junctions, unserviceable amplifier point, CS are surrounded by fences to prevent encroachments, with warning and information boards placed on the fences.

In 2003, a fire ring of pipes, high-density polyethylene, was built on the site. Nine self-draining hydrants are also installed so that the use of the fire ring does not depend on the ambient temperature. One operating pump and one spare pump with flow rates of 180 m^3/h automatically maintain a pressure in the ring of not less than 0,4 MPa.

On the site of Chiren UGS there are automatic systems with sensors for fire, smoke and gas detectors in locations which are potential sources of ignition and gas concentration level build-up connected to the alarm/signalling systems.

3.3.1. Fire alarm system

The fire alarm system is designed for the early detection of fire, indicating the exact location of the event at the address of the working detector. The use of modern technological solutions ensures high reliability and precision in fire protection. The system provides great opportunities

for adjustment, testing and analysis. The plant monitors the conditions (normal, fire, failure) of the address points and displays them on the LED indication and on the liquid crystal display.

Control, programming and signalling are carried out by a front panel in the headquarters, equipped with LED indication, liquid crystal display and a keyboard.

The constructed fire alarm system complies with the basic provisions for the early detection of ignitions and fires. Control of the condition and operability of all technical facilities and systems of the installation at any time of the day is provided. The technical execution is consistent with: the specific operating conditions in the premises, the class of explosion protection, the degree of fire hazard, the environmental conditions and the presence of disturbing factors of the installation as well as the configuration and location of the sites and the communications between them. The announcement is done through internal and external audio and light signals. The staff on duty shall carry out constant monitoring of the system.

To ensure the fire protection of the emergency gas unit there is an automatic fire alarm and powder fire extinguishing system. The fire alarm system protects the room with two fire alarm beams using thermal fire detectors. The system can be placed in manual or automatic operation. The system is under continuous control by the on-duty staff.

The extension of the production site includes fire alarm systems that will be built in buildings for electrical and automation, GMS and Fuel Gas Preparation Unit. Addressable fire alarm system will be used to secure the premises. Regarding GTKA1-4, a local fire alarm and gas alarm sensors will be mounted in the containers, including sensors, the cable system, etc. The control panel for the alarm and notification systems will be connected to UCS and subsequently to the station management system. The fire alarm is a complex electronic system which consists of different types of automatic fire detectors responding to various signs of the possibility of a fire, prior to its actual breaking out. The fire alarm system meets the following requirements:
- reliability of the entire fire alarm system
- appropriate combination of detectors to prevent false alarms
- minimal maintenance
- appropriate location of the detectors
- safety for the detector functionality
- exact data on the location of the occurrence of the fire hazard

Addressable FDS system will be used to secure the premises. The FDS will include a control panel, collective automatic detectors addressable automatic detectors, addressable button detectors located in guarded areas and sound and light alarms.

Remote transmission of fire signals, FDS malfunctions, etc., will lead to the SCS (Stationary Control System) control system.

3.3.2. Gas alarm systems

In the compressor workshop, which is the main production room, there is an automated system for identifying and announcing natural gas leaks. The system activates an audible alarm and turns on emergency ventilation in the event that the gas concentrations are being exceeded in the working environment. The system is made up of an automatic programmable station type MX 52 for signalling and visualising the presence of natural gas and 10 gas-detectors located above the compressors on the ceiling in the compressor workshop. Natural gas is lighter than air and rises in height - to the ceiling of the premises. Station MX 52 is an automatic, stationary, continuously operating device for determining the explosive concentration of natural gas. The sensors are explosion-proof performance marked "EExdIICT6". When a signal is received from a working sensor, a certain fan group, light and sound indication, is switched on.

Gas alarm systems are provided to the extension of the production site - a gas alarm system has been designed to detect flammable gases and vapours in selected buildings (*the* electrical and automation buildings, GIS and FGPU).

All enclosed premises in the UGS in which natural gas is operated are equipped with explosion-proof ventilation systems. Each explosion-proof ventilation consists of gas detectors, secondary instruments for recording natural gas gaps, audible alarm and explosion-proof fans providing eight-fold air exchange per hour in the room. The gas detectors are set to 20% by volume from the lower limit of explosion for natural gas, which fully meets the modern safety standards in the production premises.

In general, gas detectors monitor the concentration of natural gas in the rooms where the presence or leakage of gas may occur. Upon reaching the specified levels of gas concentration level in the premises, the gas detector shall provide sound and light signalization. Reaching the concentration limit also provides a parallel signal for the start of the exhaust ventilation.

Periodic monitoring and calibration of the sensors and the stations is carried out, for which special protocols are being drawn up.

3.4. Description of the technical equipment installed to limit the consequences from a major accident, including:

On the territory of Chiren UGS there are buttons for the manual activation of the fire alarm system and the areas and premises with the risk of fires are equipped with smoke and heat detectors. On the site of Chiren UGS there are automatic systems with sensors for combustion, smoke and gas detectors in locations which are potential sources of ignition and gas concentration levels build-up and are connected to the alarm/signalling systems.

3.4.1. Fire extinguishing systems

❖ **Fire protection ring at the main site of Chiren UGS**

At the main site of Chiren UGS a fire ring of pipes is built made of polyethylene with high density HDPE ø 250. Fire pumps and the fire ring serve to deliver water in the required quantity and pressure to the fire hydrants. 9 self-draining hydrants with couplings ø 75 mm are also installed so that the use of the fire ring does not depend on the ambient temperature. Fire hydrant No. 9 is used to drain the transient tank.

The pumping station consists of two centrifugal pumps (operating and spare) with flow rates of 180 m^3/h, power 37 kW, speed 2900 $^{n-1}$, head 47 m, which automatically maintain a pressure in the ring from 0.4 to 0.6 MPa. When opening a fire hydrant and lowering the pressure in the ring below 4 bar, the working pump is automatically switched on until a pressure of 6 bar is reached to switch off the pump.

The control panel is of the "soft-start" type for smooth acceleration of the pumps. When entering the synchronous mode of operation, the device switches the power supply to the control contactor of the respective pump, monitors the pressure in the fire ring, starts and stops the pumps.

By means of connecting pipelines, water from an open tank (pool) is directed to a transitional tank, from where through a suction pipeline the water reaches the pumps and is injected into the fire ring. In the transient tank, the water level is measured and the fire pumps are controlled on the basis of the readings. The pumps can be started both manually and automatically via a switch. The mode of operation is automatic – basic for the system and manual – used for adjustment, checking and in emergency cases. In automatic operation mode and operating pump failure, the spare pump is automatically switched on.

❖ Automatic fire alarm and fire extinguishing system in the emergency gas unit

To ensure the fire protection of the emergency gas unit, there is an automatic system for fire extinguishing with powder and a fire alarm. The powder fire extinguishing system is an activating extinguishing plant using powder to extinguish a possible fire in the electric current generator container.

The fire alarm system guards the room with two fire alarm beams using heat fire detectors type MM40Ex, "rod type", explosion-proof. The system can be placed in manual or automatic operation. In automatic mode with simultaneous activation of beam No1 and beam No2 after 60 sec., the fire extinguishing system with powder in the room is automatically switched on. The fire extinguishing system using extinguishing agent powder BC is realized from a tank 60 l., (60 kg. BC powder), with starting head, nozzles 2 pcs. which are installed in the container. The on-duty staff in Dispatch riim carries out constant monitoring of the system. In the case of an initial fire signal from any beam, fire bells are turned on and a light detector lights up. The start of the extinguishing cycle is carried out at the decision of the staff by pressing an extinguishing button.

❖ Firefighting equipment in the warehouse for flammable liquids and the tax warehouse

The site of the warehouse for flammable liquids is located about 200 meters northwest of the site of Chiren UGS and near the Chiren - Devene road.

The warehouse for highly flammable liquids of Chiren UGS covers a gas condensate tank with a volume of 525 m^3 - equipped with a semi-stable fire extinguishing installation and a stable, cooling installation, a methanol tank - volume 250 m^3, a pumping station and an auto storage for gas condensate and methanol and a connecting pipeline installation. The water supply for fire extinguishing of the site is realized by an underground tank and a pumping station. On the territory of the warehouse for flammable fluids a fire water pipeline has been built.

In connection with the reconstruction of the condensate and methanol warehouse in order to bring it into line with the requirements for a tax warehouse for condensate, a new fire water pipeline with steel pipes Ø125x6 was built and it is fed by the existing system. Deviations have been made to the newly designed water pipeline for the installation of stationary lafete nozzles to protect the condensate and methanol tanks in accordance with the requirements of Art. 223, paragraph 1 of Ordinance No. 1з-1971/29.10.2009. The lafete nozzles - 6 units are symmetrically located outside the casing of the tanks, on technological platforms at a height of 0.9 meters from the elevation of the adjacent terrain. Lafete nozzles are mounted on a high-pressure water supply network. Shafts with shut-off valves are built on the deviations for feeding the lafete nozzles. According to Art. 224, para. 2 of Ordinance No 1з-1971/29.10.2009, a power shaft for the mobile fire pumps and fire trucks was built to the water mains. There is also a shaft with a shut-off valve for draining the water from the water supply. Check valves are available on existing water pipe.

The existing semi-stable fire extinguishing system of the gas condensate tank serves to supply foam solution from a fire truck. A foaming agent (air/mechanical foam) is fed from a specialized fire truck to extinguish the condensate tank from the ПКМ№1. At the same time, the working pump is started to cool the tank through its cooling installation. A threefold stock of 972 litres, 3% foaming agent was provided.

❖ Internal fire protection of the buildings

The administrative building and the service buildings and premises, as well as the compressor workshop are equipped with the necessary fire extinguishing means, according to the regulatory requirements:

Initial firefighting facilities:

- Mobile fire extinguishers;
- Powder fire extinguishers;
- Carbon dioxide extinguishers;
- Water-based extinguishers;
- Fire blankets;
- Internal fire hydrants, which are connected to the fire water network installed near the entrances and outlets of the compressor workshop and the storage rooms equipped with a feeder valve, a switchboard with a hose and a nozzle for straight jet or for spraying with flow rate.

❖ **Means of fire extinguishing the extension of the production site**

In order to ensure the supply of the onsite fire mains with water quantities having the required flow volume and a sufficient amount of water a fire reserve is provided, which is stored in a fire tank. The fire-fighting tank is two-chamber, reinforced concrete, monolithic, dug into the ground, rectangular in lay-out, with entry man-holes, inflow and overflow system, and ventilation of each chamber.

A new firefighting water pump station, a new water tank and a new water supply ring will be built on the new site. It shall be supplied by a branch from the existing site freshwater pipeline. When the maximum level in the fire tank drops to a certain level, the replenishment will be carried out automatically by the opening of a system of solenoid valves.

Fire protection of the equipment located inside the container is provided for the GTCU. An automatic CO_2 fire extinguishing system is also provided.

Additional portable appliances and facilities for initial fire extinguishing are provided too.

3.5. Provision of personal protective equipment (PPE):

The individual means of protection of the personnel are stored in a storage room in accordance with the requirements of the Ordinance on the procedure for the production, storage, renovation, maintenance, provision and reporting of stocks of individual means of protection and are distributed by the Group for receiving and distributing individual means of protection.

4. Measures to limit the risks to individuals present in the company and/or facility, including the means of disclosure and the action to be taken upon receiving a warning.

Bulgartransgaz EAD has introduced an internal procedure **П-БТГ Emergency Preparedness and Response Ability**. The procedure defines the order and responsibilities for the establishment of organization and implementation of preventive measures for the adequate and timely response in the event of emergencies in order to reduce the associated adverse effects on the health and safety of the employees and in fulfilment of its obligations to society.

The operator has prepared the information required by the competent authority for the preparation of an external emergency plan pursuant to art. 35, para. 4 item 9 of the Disaster Protection Act, which is provided to the competent authorities.

4.1. Emergency groups and technical means of response

On the basis of the procedure and in compliance with the regulatory requirements, by an Order of the Head of Regional Unit Chiren UGS (**Appendix No 1**) a Specialized group - the Emergency Plan Implementation Headquarters (EPIH) was set up for the implementation of the plan. The Chiren UGS Emergency Plan Implementation Headquarters is responsible for creating and maintaining, in constant readiness, the overall organization for the prevention, localization and elimination of accidents, fires and disasters. It liaises with and informs the other authorized organs.

4.1.1. Composition of the EPIH in Chiren UGS:

Headquarters responsible for the implementation of the emergency plan

Head, Regional Unit Chiren UGS

DEPUTY CHAIRMAN:

Head, Regional Unit/Chiren UGS - Deputy/Instrumentation Control and Automation

and members:

1. Head, Service/Dispatch Service, Chiren UGS;
2. Head/IT;
3. Head/Service Power Supply;
4. Technologist/Operations;
5. An OHS Specialist;
6. Mayor of Chiren village

Support groups were set in Chiren UGS to support EPIH:

- ***Monitoring and disclosure group***

Common tasks of the group:

✓ To organise continuous monitoring in case of announced danger of disasters and accidents in the area of Chiren UGS;

✓ To survey the area of Chiren UGS immediately after a disaster or an accident and to provide the first information about the victims and the condition of the building stock;

✓ To assist the Chairman of the Headquarters for coordination of Chiren UGS in clarifying the overall situation after a disaster or an accident;

✓ To inform the Headquarters in a timely manner about any changes in the situation.

- ***Sanitary post***

Common tasks of the group:

✓ To participate in the conduct of all sanitary and anti-epidemiological activities in Chiren UGS.

✓ In a real situation to assist the medical emergency groups dispatched to the location in their efforts to save the health/lives of the victims.

- ***Group for receiving and distributing individual means of protection***

Tasks:

✓ To store and service the available personal protection equipment, according to the instructions given;

✓ In the event of a shortage of PPE, to make a request for the provision of the necessary quantities;

✓ Keep an accurate account of the available and appropriate PPE;

✓ To create the necessary organization for the rapid receipt and distribution of the PPE;

✓ To draw up lists of the sizes of the necessary PPE to be updated at the beginning of the year.

- ***Group for the maintenance and exploitation of collective means of protection:***

Tasks:

- ✓ If no protective equipment is in place, when/if necessary:

- To determine suitable pressurization rooms in the building;

- To organize the immediate closing of doors, windows and vents in the buildings;

- ✓ To distribute the previously provided means for pressurizing the premises;
- ✓ To organize, if necessary, the rapid pressurization of predetermined rooms;
- ✓ To monitor the order and discipline in the pressurized rooms when are used for their intended purpose.

4.1.2. Fire groups

By Order of the Head of Regional Unit Chiren UGS fire groups in the administrative building and the area of Chiren UGS were appointed (**Appendix No.10):**

The general tasks of the firefighting groups in Chiren UGS are to:

- ✓ Determine the exact location, type and condition of the burning facilities;
- ✓ Determine the presence of nearby sites presenting a risk of secondary outbreaks of fire;
- ✓ Determine the presence and condition of injured people;
- ✓ Determine the type and concentration of toxic substances released during combustion.

Structure of the groups:

A: Firefighting group at the administrative building;

B: Firefighting group at the Instrumentation Control and Automation;

C: Firefighting group at the Repairs workshop - Compressor Workshop;

D: Firefighting group of the electrical fitters;

E: Firefighting group at the warehouse for flammable liquids;

F: Firefighting groups of drivers, fitters, welders;

4.1.3. Emergency groups

For the timely elimination of accidents in Chiren UGS, two emergency groups have been formed and they function as determined by an Order of the Head of the Regional health inspectorate **(Appendix No. 2)**

- **Emergency group to eliminate an accident in a gas pipeline (gathering) or well;**

- **Emergency group to eliminate an accident in the compressor workshop and the aboveground facilities.**

The main task of the emergency groups is to organize the elimination of the consequences from the accidents. The emergency groups perform their activities in continuous connection and coordination with the Central Dispatch Office and the regional dispatch offices under the management structure Chief Dispatching Division. If necessary, other specialists, machines and equipment can be involved in the activities of the emergency groups.

4.2. Procedure for early warning and notification in the case of accidents

In the event of an emergency or other situations outside of working hours, the information is received by the dispatcher on duty at the Regional Dispatch Division of Chiren UGS. The dispatcher shall notify the relevant officials and services included in the scheme (**Appendix No. 3).**

During working hours, information from the dispatch service is transmitted to:

- Central Dispatch Office of Bulgartransgaz EAD, Sofia

– Head of Regional Unit, or his deputy, and through the relevant administrative manager- to the staff of the company. The connection with the emergency groups is carried out through the dispatcher on duty or directly by the Head of the Regional Unit or an individual authorized thereby.

1. Disclosure of personnel:

1.1. During working hours, disclosure is made by the deputy chairperson of the EPIH.

1.2. In his absence, the announcement is made by the dispatcher on duty.

1.3. On weekends, the disclosure is made by the **dispatcher on duty or the specialist on duty**. The available means are used for the announcement: telephone; radio; ring; mobile telephones.

Note: If the nature of the disaster is such that it allows the work to be phased in order to avoid panic, it is advisable to initially inform the management, administrative, service staff and workers to carry out the measures to inform and organize the actions of the personnel.

5. Measures to ensure early warning, alarm and information to the mayor of the municipality in the event of an emergency; the type of information provided with the initial announcement and the ways and measures to provide additional information.

5.1. Maintenance of communication channels, equipment, materials and emergency facilities

If necessary, the population is informed through the specialized state (district, municipal) authorities or by operational means through the mayor of the settlement by the teams of the Company.

In the event of an accident or fire, which creates a real danger to the population near Chiren UGS, the Regional Security Council - Vratsa and the Municipal Security Council - Vratsa, a message on phone 112, short messages in the Latest News section on the website of Bulgartransgaz EAD shall be notified by phone at the address: www.bulgartransgaz.bg, and if necessary, the distribution of leaflets to the public. The initial disclosure shall contain information on the emergency situation, protection measures and behaviour and the ways and places set up for obtaining additional information. The information given to external structures and key units within the rescue system shall be carried out in accordance with the scheme in (**Appendix No. 4).**

Effective application of the requirements of Article 116(d)(1) of the EPA and the Ordinance on the prevention of major accidents with dangerous substances and limitation of their consequences for providing the affected public with clear and understandable information about the emergency planning and the necessary measures and behaviour in the event of a major accident at Bulgartransgaz EAD, Regional Unit Chiren (a company with a high risk potential). Up-to-date information shall be published on the Company's website at the following e-mail address:

https://www.bulgartransgaz.bg/bg/pages/chirenobshta-107.html

The elements of Bulgartransgaz communication system which provide the communication links between the company's sites during rescue and emergency recovery works are described in the Emergency Plan of the Central Directorate of Bulgartransgaz EAD.

Contact information for announcements to the emergency groups, a list of available motor vehicles with standard and specialized equipment, contact information for disclosure of the EPIH has been attached to the Chiren Emergency plan.

The mayor of Chiren village is a member of the Emergency Plan Implementation Headquarters, approved with an Order of the Head of the regional Unit, Chiren village. Informing the residents of the village of Chiren will be done through the mayor with radio messages and an audible signal and - if necessary - through the distribution of leaflets.

In the event of an accident endangering the population, the operator publishes short messages in the "Latest news" section of the Bulgartransgaz EAD website, with address: www.bulgartransgaz.bg

The dispatch point in Chiren UGS is equipped with an IP phone, mobile phone, internet connection through which the communication will be carried out in case of disasters, accidents and fires. On the territory of Chiren UGS a sound alarm will be used during working hours to quickly inform the staff in the event of a disaster or an accident.

All officials and security guards at Chiren UGS, who have found malfunctions, chemical spills, accidents, natural disasters, etc., are obliged to immediately notify the dispatcher on duty, the head of Regional unit at Chiren or his deputy.

In turn:

The dispatcher on duty must inform about the situation the Central Dispatch Office of Bulgartransgaz EAD, Sofia and the Regional Unit Head;

The duties of the dispatcher on duty are listed in Ordinance No 12/10.06.2004 on the activity of the operators of the gas transmission and distribution networks.

1. Upon receipt of a signal for disasters, accidents and fires, the dispatcher on duty is obliged to immediately notify the Head of Regional Unit Chiren/Head of EPIH/ according to a disclosure scheme attached to the Emergency plan, by accurately registering the time of the received signal.

2. Upon receipt of a signal for disasters, accidents and fires, the dispatcher on duty shall immediately provide information to the officer on duty in the Physical Dispatching and Regimes Department of the Central headquarters of Bulgartransgaz EAD and to the Head of Department Regional Dispatch Service Chiren UGS.

3. Upon order by the head of the EPIH, until the arrival of the emergency teams the dispatcher on duty shall inform the Fire Safety and Protection of the Population Regional Services and the Emergency Centre and maintain permanent contacts with them as per the disclosure scheme.

4. The dispatcher on duty shall stay in constant contact with the on duty dispatcher at the Central Dispatch Division of Bulgartransgaz EAD main office and shall comply with the instructions he receives.

5. The dispatcher on duty collects, summarizes and analyses the information from the place of the event and reports it to the Head of Regional Unit Chiren UGS.

6. In case of emergency events, the dispatcher on duty has the right to cancel the execution of authorized requests for a certain time period and to order the sending of an emergency group for

inspection and troubleshooting in cases where this is related to ensuring the normal operation of the operationally managed, by him, natural gas storage systems at Chiren UGS.

7. It shall be prohibited to replace and undertake a work shift during emergency events or serious disturbances in the operation of the network of Chiren UGS, as well as during operational switch-overs. In such cases, the operational personnel taking the new work shift shall be obliged to assist the previous shift under its orders.

7. When receiving alerts for different types of hazards, the dispatcher on duty shall immediately announce them to the personnel from all work shifts.

- The **Head of Regional Unit** implements the disclosure scheme to the members of the Coordination headquarters and the emergency formations.

Until the arrival of the members of the Headquarters, under the direction of the relevant official present, the necessary measures are taken to contain and liquidate the consequences, as long as this does not conflict with other instructions. They engage all workers if their safety is not jeopardized. If necessary, the mayor of the local settlement is also informed.

The organs of control, the manpower and means of protection must be constantly ready to act and prevent the consequences from natural disasters, fires or industrial accidents and be notified immediately when a situation arises. To maintain this preparedness, periodic exercises (trainings) are held according to an approved annual schedule.

In Chiren UGS warehouses, the following has been made available: tools, equipment, protective equipment, spare materials and parts that will be needed for the elimination of various accidents. Periodically reviews of their condition and availability are made.

5.2. Time to get ready for response by the responsible structures and persons

The disclosure itself is carried out by the dispatcher on duty after an order from the Regional Unit Head and a received notification. For this purpose, a communication system has been organized with notifications **(Appendix No.3)**:

1. The operator on duty at the facility (the dispatcher on duty at Chiren UGS)

The dispatcher on duty informs about the situation immediately:

- Regional Unit Head;

- Central Dispatch Office of Bulgartransgaz EAD, Sofia

- Specialist on duty outside working hours according to the on-duty schedule for the relevant month

The dispatcher on duty organises the timely collection and summary of information about the situation, its consequences, the measures for its elimination, the actions of the emergency and repair groups. The same is promptly sent to the Central Dispatch Office of Bulgartransgaz EAD, Sofia.

2. EPIH Chairperson

The Regional Unit Head - Chiren UGS is the Chairperson of the EPIH.

3. The Headquarters responsible for the implementation of the Emergency Plan

Notification of the Coordination Headquarters is carried out according to the diagrams in **Appendix 7**

The headquarters shall notify in the following cases:

- in case of danger and critical situation caused by disaster, accident or fire;
- When conducting an exercise under the Plan of the Municipal Coordination Headquarters;
- When checking the readiness of the groups to the EPIH;
- By the decision of the EPIH Chairperson.

Getting the EPIH ready to act.

The EPIH gathers at the designated place, analyses the situation, makes corrections depending on the specific situation and specifies:

- The measures for immediate implementation;
- The order of actions;
- The tasks;
- The order of exchanging information;
- The composition and tasks of the interaction bodies and groups and the communication with them.

4. Disclosure of personnel:

4.1. During working hours, disclosure is made by the deputy chairperson of the EPIH.

4.2. From 5:00 p.m. to 8:30 a.m. and on weekends, the disclosure is made by the Duty dispatcher or the Duty specialist, according to a schedule prepared in advance and approved by the Regional Unit Head (EPIH Chairperson).

4.3. Facility personnel is disclosed via:

- Sound alarm

Note: If the nature of the disaster is such that it allows the work to be phased in order to avoid panic, it is advisable to initially inform the management body, administrative and service personnel, who will carry out the measures to inform and organize the actions of the personnel.

5. Groups supporting the EPIH:

- Announcements to the groups in support of the EPIH are in accordance with the diagrams in (**Appendix No. 3).**

Getting the groups ready.

The groups shall gather at Chiren UGS site. The tasks are further specified. The various types of firefighting means shall be distributed on the spot in the event that they were not supplied in advance or are not in their usual places (fire extinguishers, gas masks, emergency equipment, etc.)

The time for emergency group readiness is:
– during working hours – **up to $0^{+\,0.30}$ hours**,
– outside of working hours – **up to $2^{+\,0.40}$ hours**

5.3. Procedure for notifying the executive bodies when needed to introduce the emergency plans

5.3.1. Interaction between the executive authorities and the constituent parts of the ESS.

The scheme for interaction with external units and structures is shown in (Appendix **No. 4)** and the telephones for connection with the core units of the unified rescue system are given in (**Appendix No.5).**

In order to implement the activities according to the nature of the disaster, the Mayor of the municipality by order establishes emergency headquarters for the implementation of the municipal disaster action plan. The place where it is to be set up is the conference room of the municipality.

A backup location - if necessary - is an anti-radiation shelter, located in the underground floor of the municipality building or another such explicitly indicated by the head of the operation depending on the situation.

The headquarters for the implementation of the municipal disaster action plan performs the following main functions:

- ✓ analyses the information about the disaster;
- ✓ take measures to contain the disaster;
- ✓ carries out interaction at municipal, regional and national level between the executive authorities;
- ✓ inform the population and the media about the development of the disaster, about the measures to limit and control it and about the necessary precautions and actions for the population;

For the implementation of the coordination and interaction between the executive authorities, the expert group shall include representatives of the competent institutions or departments involved in limiting and eradicating the disaster.

The procedure for the timely notification of the organs of executive power and the population in case of a threat of or an occurring disaster shall be determined by the normative framework.

The coordination of the actions of the constituent parts of the unified rescue system is carried out through the operational communication and information centres. The interaction between the units of the unified rescue system, involved in urgent emergency and recovery works in the disaster area, shall be carried out by the head of the operation on the spot, the head of the territorial unit of DG FSRP or an official authorized thereby except in the case of epidemics and epizootic diseases, where the head of the activities on-site shall be the head of the regional inspectorate for the protection and control of public health or of the regional veterinary medicinal service.

1.1. The organisation of disaster protection actions shall include the announcement of:

- ✓ Forces and means of response and elimination of the consequences from the disaster;
- ✓ Forces and means of response to endangered sites /commercial companies, sole traders and non-profit legal entities/;
- ✓ Voluntary formations;
- ✓ Manpower and municipal resources;
- ✓ Manpower and the means of the state structures located on the territory of the municipality;
- ✓ Manpower and the means of legal entities, sole traders and non-profit legal entities.
- ✓ The order set for attracting additional manpower located outside the territory of the municipality.

The procedure for announcing the setting up of the emergency Headquarters for the implementation of the municipal disaster action plan, the mayoralties and the formations is in accordance with the plan elaborated by the municipality.

1.2. Order for requesting assistance from external organisations during emergency.

The request for assistance is carried out by the dispatcher on duty at Bulgartransgaz EAD – Chiren UGS after an order by the Head of Regional Unit Chiren and in coordination with the Operational headquarters of Bulgartransgaz" EAD – Sofia.

If it is necessary to carry out rescue and urgent emergency and restoration works on the territory of another operational area, the notification shall be received by the EPIH of the Head office of Bulgartransgaz EAD.

In UGS there is an organized 24-hour duty of dispatchers from the Regional Dispatch Service. The dispatcher on duty maintains constant contact (landline/mobile phone) with the Central Dispatch Office, Sofia, with the departmental subdivisions involved in overcoming the emergency situation.

6. Measures and ways of training the staff for their duties and the actions to be taken in the event of an accident and the coordination of these actions with the mayor of the municipality in the implementation of the external emergency plan.

After presenting information about the site used in the preparation of the External emergency plan of the municipality, Chiren UGS has no obligations to participate with available equipment or manpower in the implementation of the municipal external emergency plan.

Planning and conducting training for emergency situations in the implementation of an internal emergency plan.

In order to maintain the state of readiness and responsiveness of the company as a whole and the responsible individuals and structures in particular, Bulgartransgaz EAD plans and conducts training and evacuations runs with simulations of emergencies as follows:

emergency drills – to simulate situations and scenarios in accordance with the approved emergency plans;

firefighting drills:

- Training evacuations in accordance with the requirements of Ordinance No. 8121з-647 of 01.10.2014 on the rules and norms for fire safety during operation of the sites;

- drills to simulate emergencies as per the specialized action plans, part of the emergency plans in the company.

All trainings and drills are planned in the Annual Schedule of Emergency and Fire Drills of Bulgartransgaz EAD (**Appendix No.9),** and a protocol is drawn up for each drill.

The announcement procedures in cases of failure are attached to the Emergency Plan of Chiren UGS.

7. Planned manpower and means necessary for rescue and emergency recovery operations outside of the territory the company/facility.

After presenting information about the site used in the preparation of the External emergency plan of the municipality, Chiren UGS has no obligations to participate with available equipment or manpower in the implementation of the municipal external emergency plan.

8. Protocol(s) for consultations with natural and/or legal individuals operating on the territory of the enterprise/facility, including contractors and/or subcontractors.

BULGARTRANSGAZ EAD EMERGENCY PLAN
REGARDING: REGIONAL UNIT CHIREN UGS – PART II
Year: 2021 - Revised

MINUTES OF MEETING

Today, 10.02.2022, a consultation was held with personnel working on the territory of Chiren Underground Gas Storage, in accordance with the requirements of Art. 8 of the Ordinance for prevention of major accidents with dangerous substances and for limitation of their consequences (Promulgated SG No. 76 of 5.10.2012) in connection with update of the Internal Emergency Plan for the facility.

1. Consultation parameters:

a/ date: 10.02.2022

b/ location: in the administrative building of Chiren Underground Gas Storage at /duration: 2 p.m. - 3 p.m.

2. Meeting format:

a/ Head of the regional unit (RU) Chiren UGS

Dipl. Eng. Angel Konov - Head of RU Chiren UGS and Chairman of the Crises team for implementation of the Emergency plan

b/ representatives of the management and executive personnel of Chiren UGS:

Dipl. Eng. Plamen Filipov Petkov - Head of C&I and Automation Dpt.; Deputy Chairman of the Crisis team; Head of Monitoring and Disclosure Group; Head of Emergency group for accidents' elimination in Compressor plant and above-ground facilities;

Dipl. Eng. Kostadin Lyubomirov Apostolov - Head of Regional Dispatching Office Chiren UGS and member of the Crisis team; member of the Monitoring and Disclosure Group and member of the Group for Maintenance and Use of Collective Protective Equipment;

Dipl. Eng. Georgy Goranov Ivanov - Head of Information and Telecommunication Services Dpt. and member of the Crisis team; member of the Monitoring and Disclosure Group;

Dipl. Eng. Evgeny Nikolov Petkov - Power engineer; member of the Crisis team; Head of Sanitary service; and Deputy Head of Emergency Group for accidents' elimination in the Compressor plant and above-ground facilities;

Dipl. Eng. Mario Tsolov Tsvetkov - Technologist and member of the Crisis team;

Dipl. Eng. Tsvetan Angelov Kerefeyski - Occupational Health and Safety (OHS) expert, member of the Crisis team and Head of Group for Maintenance and Use of Collective Protective Equipment;

Dipl. Eng. Valentina Petkova Ivanova - Geologist and member of Monitoring and Disclosure Group;

Georgy Rusev Tsekov - Storeman and member of Monitoring and Disclosure Group;

Dipl. Eng. Nikolay Tomov Dryanovsky - Ecologist and member of the Sanitary service;

Gabriela Tsvetanova Gancheva - Cleaner/hygienist and member of the Sanitary service;

Robertino Andreev Kremensky - Operational accountant and member of the Sanitary service;

Dipl. Eng. Borislav Vasilev Stoev - Head of the ASL Dpt. and Head of Group for receiving and distributing Personal Protective Equipment (PPE);

Kalina Asenova Ivancheva - Operational accountant and member of the Group for

receiving and distributing PPE;

Dipl. Eng. Ivaylo Angelov Dimitrov - Head of Wells Dpt.; member of the Group for receiving and distributing PPE; and Head of Emergency Group for accidents' elimination on gas pipeline (gathering) or well;

Alexander Petrov Alexandrov - Driver, truck; and a member of the Group for Maintenance and Use of Collective Protective Equipment;

Slavy Angelov Sofronov - Operator, wells equipment and driver; member of Emergency Group for accidents' elimination on gas pipeline (gathering) or well;

Plamen Ivanov Hoisov - Operator, wells equipment and driver; and a member of Emergency Group for accidents' elimination on gas pipeline (gathering) or well;

Alexander Vasilev Marinov - Worker, Gatherings; member of Emergency Group for accidents' elimination on gas pipeline (gathering) or well;

Tsvetan Nikolov Dimitrov - Worker, Gatherings; member of Emergency Group for accidents' elimination on gas pipeline (gathering) or well;

Zlaty Krastev Marinov- Welder; member of Emergency Group for accidents' elimination on gas pipeline (gathering) or well;

Sergey Yordanov Kutov - GCU Technologist; Deputy Deputy Head of Emergency Group for accidents' elimination in Compressor plant and above-ground facilities;

Valery Vladinov Angelov - Mechanical fitter GCU; member of Deputy Head of Emergency Group for accidents' elimination in the Compressor plant and above-ground facilities;

Stelian Petkov Benchev - Mechanical fitter GCU; member of Deputy Head of Emergency Group for accidents' elimination in the Compressor plant and above-ground facilities;

Georgy Petrov Georgiev - Mechanical fitter GCU; member of Deputy Head of Emergency Group for accidents' elimination in the Compressor plant and above-ground facilities;

Tony Hristov Ivanov - Mechanical fitter GCU; member of Deputy Head of Emergency Group for accidents' elimination in the Compressor plant and above-ground facilities;

Mihail Todorov Davidov - Mechanical fitter GCU; member of Deputy Head of Emergency Group for accidents' elimination in the Compressor plant and above-ground facilities;

Rumen Kirilov Radkov - Mechanical fitter GCU; member of Deputy Head of Emergency Group for accidents' elimination in the Compressor plant and above-ground facilities;

Kalin Detelinov Kostov - Electric fitter; member of Deputy Head of Emergency Group for accidents' elimination in the Compressor plant and above-ground facilities;

Tsvetan Vassilev Radulov - Electric fitter; member of Deputy Head of Emergency Group for accidents' elimination in the Compressor plant and above-ground facilities.

3. Results of the meeting

During the meeting, documents were made available to all participant to examine the updated Internal Emergency Plan of Bulgartransgaz EAD regarding RU Chiren UGS.

The purpose of the meeting was to give an opportunity to the personnel to express their opinions as they play a major role in implementation of the emergency plan, and in case they have any proposals for adjustments, to be reflected in the plan in a timely manner.

After familiarizing themselves with the content of the plan and in more detail with duties' distribution of the persons involved in implementation of the measures envisaged in the plan, the participants in the meeting expressed their agreement to the presented emergency plan.

All principal actors involved in implementation of the Urgent emergency rescue operations in the event of an accident at the site of RU Chiren UGS share Bulgartransgaz EAD

policy for prevention of major accidents and agree with the distribution of their duties in implementation of the emergency plan.

This Minutes of meeting was prepared and signed in one copy and will be kept at site.

Angel Konov
/Head of Regional unit Chiren UGS/

Plamen Petkov
/Head of C&I and Automation Dpt./

Kostadin Apostolov
/ Head of Regional Dispatching Office /

Georgy Ivanov
/ Head of Information and Telecommunication Services Dpt. /

Evgeny Petkov
/ Power engineer /

Mario Tsvetkov
/ Technologist /

Tsvetan Kerefeysky
/ OHS expert /

Valentina Ivanova
/ Geologist /

Georgy Tsekov
/ Storeman /

Nikolay Dryanovsky
/ Ecologist /

Gabriela Gancheva
/ Cleaner/Hygienist /

Robertino Kremensky
/ Operational accountant /

Borislav Stoev
/ Head of ASL Dpt. /

Kalina Ivancheva
/ Operational accountant /

Ivaylo Dimitrov
/ Head of Wells Dpt. /

Alexander Alexandrov
/ Truck driver /

Slavy Sofronov
/ Operator, wells equipment /

Plamen Hoysov
/ Operator, wells equipment /

Alexander Marinov
/ Gatherings worker /

Tsvetan Dimitrov
/ Gatherings worker /

Zlaty Marinov
/ Welder /

Sergey Kutov
/ Technologist GCU /

Valery Angelov
/ Mechanical fitter /

Stelian Benchev
/ Mechanical fitter GCU /

Georgy Georgiev
/ Mechanical fitter GCU /

Tony Ivanov
/ Mechanical fitter GCU /

Kalin Kostov

/ Electrical fitter /

Mihail Davidov

/ Mechanical fitter GCU /

Rumen Radkov

/ Mechanical fitter GCU /

Tsvetan Radulov

/ Electrical fitter /

APPENDICES

Appendix No. 1

ORDER
No.БТГ-ЕЧ-Зап.-6

Chiren UGS, 13 January 2021

Pursuant to Art.32, para.2 and para.3 of the Articles of Association of Bulgartransgaz EAD, Art. 35 of the Protection in the Event of Disasters Act (Promulgated SG No.102/19.12.2006), Art.107, para.1 and para.5 of the Environmental Protection Act (Promulgated SG No.91 of 25.09.2022), Procedure "Preparedness for Emergency Situations and Ability to Response" and in connection with the Emergency Plan prepared in accordance with Art.1, para.1, item 5 and in accordance with Appendix No.5, item II of the Ordinance on the Prevention of Major Accidents with Hazardous Substances and Limitation of Their Consequences (Decree of Council of ministers No.2 of 11.01.2016), and the proper organization of personnel actions in the event of disasters and accidents,

I HEREBY APPOINT:

A Headquarters for the implementation of the Emergency Plan under my leadership as Chairperson, composing of:
Deputy Chairperson:
Eng. Plamen Filipov Petkov - Head of the Instrumentations and Controls Department
and **Members:**
1. Eng. Kostadin Lyubomirov Apostolov - Head of the Regional Dispatcher Center
2. Eng.Georgi Goranov Ivanov - Head of the Information Technology Assurance Department
3. Eng. Evgeni Petkov - Head of the Energy Department
4. Eng. Mario Tsolov Tsvetkov - Technologist
5. Eng. Tsvetan Angelov Kerefeyski - Specialist - Healthy and Safe Conditions at Workplace
6. Delyan Damyanov – Mayor of Chiren village

with the task to organize and direct the rescue and urgent emergency recovery works and liquidation of the consequences of disasters and accidents.

In support of the Coordination Headquarters, the support groups shall act as follows:

MONITORING AND DISCLOSURE GROUP

Head:
Eng. Plamen Filipov Petkov - Head of the Instrumentation and Controls Department
and Members:
1. Eng. Valentina Petkova Ivanova - Geologist
2. Eng. Georgi Goranov Ivanov - Head of the Information Technology Assurance Department
3. Eng. Kostadin Lyubomirov Apostolov - Head of the Regional Dispatcher Center
4. Georgi Russev Tsekov - Storekeeper

SANITARY POST
Head:
Eng. Evgeni Petkov - Head of Enrergy Department
and Members:

1. Eng. Nikolay Tomov Dryanovski - Ecologist
2. Lina Georgieva – Technical Assistant
3. Robertino Andreev Kremenski - Accountant, Operational

GROUP FOR RECEIVING AND DISTRIBUTING THE PERSONAL PROTECTIVE EQUIPMENT (PPE)

Head:
Eng. Borislav Vasilev Stoev - Head of the Administration Services and Logistics Directorate
and members:
1. Georgi Russev Valkanin - Storekeeper
2. Kalina Asenova Ivancheva - Accountant, Operational
3. Eng. Ivaylo Angelov Dimitrov - Head of Drilling Department

GROUP FOR OPERATION AND MAINTENANCE OF THE COLLECTIVE PROTECTIVE EQUIPMENT

Head:
Eng. Tsvetan Angelov Kerefeyski - Specialist, Healthy and Safe Conditions at Workplace
and Members:
1. Eng. Kostadin Lyubomirov Apostolov - Head of the Regional Dispatcher Center
2. Aleksandar Petrov Aleksandrov - Truck Driver

The functional duties of the members of the staff for the implementation of the Emergency Plan in the event of disasters and accidents are as follows:

No.	First, middle and last name	Duties
1	Eng. Plamen Filipov Petkov	Coordinates the actions of individual units when liquidating disasters and accidents. Monitors the compliance with the requirements of the plans for the liquidation of various disasters and accidents in the Chiren UGS, as well as the interaction with the Fire Safety and Protection of the Population Regional Services - Vratsa and other necessary services from the city. Monitors the compliance with disaster and accident response actions, mainly in the Compressor workshop and the open site of Chiren UGS. Monitors for the elimination of accidents, according to the Ordinance on the structure and safe operation of the transmission and distribution gas pipelines and the facilities, systems and devices for natural gas (Adopted by CMD No.171 of 16.07.2004)
2	Eng. Evgeni Petkov	Manages safety when working on the electrical equipment at Chiren UGS.
3	Engineer Georgi Goranov Ivanov	Provides the necessary information for the liquidation of disasters and accidents at Chiren UGS and eventually for the evacuation of workers and employees to a safe place.

4	Eng. Kostadin Lyubomirov Apostolov	Provides information from the dispatcher on duty and eventually for evacuation of workers and employees to a safe place.
5	Eng. Mario Tsolov Tsvetkov	Renders assistance when evacuating people and material assets, as well as ensuring the safety of people in liquidation of disasters and accidents, as well as in the provision of medical assistance.
6	Eng. Tsvetan Angelov Kerefeyski	Directly leads the actions of the firefighting units in extinguishing fires and establishes communication with the Fire Safety and Protection of the Population Regional Service - Vratsa.
7	Delyan Damyanov – Mayor of Chiren village	Informs the population of Chiren for a possible danger and organises its evacuation

The members of the Assistance Groups to the Standing Committee will act as follows:

1. MONITORING AND DISCLOSURE GROUP

1	Eng. Plamen Filipov Petkov (Head)	Monitors the actions taken to eliminate accidents, according to the Ordinance on the structure and safe operation of transmission and distribution gas pipelines and natural gas facilities, systems and devices, Adopted by MCD No.171 of 16.07.2004. Ensures the communication of the Headquarter with the Head or his Deputy in the absence of the Head, and receives the necessary instructions and directs the entire activity to eliminate the accident. Discloses the Ecologist of Chiren UGS.
2	Eng. Valentina Petkova Ivanova	Provides the drilling team with necessary spare parts and materials.
3	Eng. Georgi Goranov Ivanov	Ensures connections at Chiren UGS with the necessary spare parts and materials.
4	Eng. Kostadin Lyubomirov Apostolov	Provides the group with information from the dispatcher on duty.
5	Gerogi Russev Tsekov	Distributes necessary spare parts and materials and refuels motor vehicles.

Common tasks of the Group:

- Organizing continuous monitoring in the event of declared hazard of disasters and accidents in the area of Chiren UGS;
- Visiting the area of Chiren UGS, immediately after a disaster or accident and providing the initial information about victims and the state of the building stock;
- Rendering aassistance to the Chairperson of the Coordination Headquarters in clarifying the overall situation after a disaster or accident;
- Promptly informing the Headquarters about any changes in the situation.

2. SANITARY POST

1	Eng. Evgeni Petkov	Organizes the actions of the members of the sanitary post

2 3 4	Eng. Nikolai Tomov Dryanovski Gabriela Tsvetanova Gancheva Robertino Andreev Kremenski	Tasks: • Participates in the implementation of all sanitary and anti-epidemiological measures at Chiren UGS; • Supports in a real situation the dispatched medical forces in their efforts to save the lives of the victims.

3. GROUP RESPONSIBLE TO RECEIVE AND DISTRIBUTE THE PERSONSL PROTECTIVE EQUIPMENT (PPE)

1	Eng. Borislav Vasilev Stoev (Head)	Organizes the actions of the members of the group
2 3 4	Georgi Russev Tsekov Kalina Asenova Ivancheva Eng.Ivaylo Angelov Dimitrov	Tasks: • Stores and services the available PPE, according to the given instructions; • In the event of a shortage of PPE, makes a request to the Administration Services and Logistics Directorate at the Central Administration to ensure the necessary quantities; • Keeps an accurate record of the available and applicable PPE; • Creates the necessary organization for the rapid provision and distribution of PPE; • Prepares lists of the sizes of the necessary PPE, updating it at the beginning of the year

4. GROUP FOR MAINTENANCE AND OPERATION OF THE COLLECTIVE PROTECTIVE EQUIPMENT

1	Eng. Tsvetan Angelov Kerefeyski	Organizes the actions of the members of the group
1 2	Eng. Kostadin Lyubomirov Apostolov Aleksandar Petrov Aleksandrov	**Tasks:** • If there is no protective facility built, if necessary: - Organizes, if necessary, the quick closing of the doors, windows and vents in the buildings; • Distributes the pre-provided means at hand for pressurizing the premises; • Organizes, if necessary, the rapid pressurization of the previously determined premises; • Monitors the order and discipline in pressurized rooms when they are used for their intended purpose.

This Order cancels Order No. БТГ-ЕЧ-Зап.-11/15.01.2020.
I entrust the execution of the Order to Eng.Plamen Filipov Petkov as Head of the Instrumentation and Controls Department.
This order to be brought to the attention of the responsible persons for information and execution.

ENG. ANGEL KONOV (Sgn.ill)
Regional Unit Head at Chiren UGS
Bulgartransgaz EAD
Seal of Bulgartransgaz EAD, Chiren UGS

Appendix No. 2

BULGARTRANSGAZ

ORDER
No. БТГ-ЕЧ-Зап.-7

Chiren UGS, 13 January 2021

Pursuant to Art.32, para.2 and para.3 of the Articles of Association of Bulgartransgaz EAD, Art.35 of the Protection in the Event of Disasters Act (Promulgated SG No.102/19.12.2006), Art.107, para.1 and para.5 of the Environmental Protection Act (Promulgated SG No.42 of 07.06.2022), Procedure "Preparedness for Emergency Situations and Ability to Respond" and in connection with the Emergency Plan prepared in accordance with Art.1, para.1, item 5 and in accordance with Appendix No.5, item II of the Ordinance on the Prevention of Major Accidents with Hazardous Substances and Limitation of Their Consequences (Decree of Council of Ministers No.2 of 11.01.2016), Permit for the operation of Chiren UGS - No.124/2008. Ordinance on the structure and safe operation of transmission and distribution gas pipelines and facilities, systems and devices for natural gas, (Adopted by Decree of Council of Ministers No.171 of 16.07.2004) and the proper organization of the actions of personnel in the event of disasters and accidents,

I HEREBY ORDER:

To be formed the following groups for the liquidation of accidents occurring on the territory of Chiren UGS, composing of:

1. Emergency group for the liquidation of an accident along a gas pipeline (gatherings) or well.
Head:
Eng. Ivaylo Angelov Dimitrov - Head of Drilling Department

Members of the emergency team:
1. Slavi Angelov Sofronov - Operator, drilling equipment (wells)
2. Plamen Ivanov Hoysov - Operator, drilling equipment (wells)
3. Aleksander Vassilev Marinov - Worker, RR of LG/Gas flow-lines
4. Tsvetan Nikolov Dimitrov - Worker, RR of LG/Gas flow-lines
5. Zlati Krastev Marinov - Welder
6. Anatoli Yanchev - Truck driver

The service of the emergency group should be carried out with all-terraon vehicles: UAZ S 7601 PM; GAS C 2153 MC; VW Doka, CA 6038 HX and Excavator Fiat Kobelco, C 7225 EH and with special vehicles: Mobile crane MAZ K-61 C 8533 PM; Unit KRAZ 257 S 8903 PM.

2. Emergency group for the elimination of an accident in the compressor workshop and overhead facilities

Head:
Eng. Plamen Filipov Petkov - Head of the Instrumentation and Controls Department

and Deputy Heads:
1. Eng. Evgeni Petkov - Head of Energy Department
2. Eng. Sergey Yordanov Kutov - Technologist, Gas Compressor Unit

Emergency team members:
1. Rumen Dacov - Mechanical Locksmith, Gas Compressor Unit
2. Steliyan Petkov Benchev - Mechanical Locksmith, Gas Compressor Unit
3. Georgi Petrov Georgiev - Mechanical Locksmith, Gas Compressor Unit
4. Toni Hristov Ivanov - Mechanical Locksmith, Gas Compressor Unit
5. Mihail Todorov Davidov - Mechanical Locksmith, Gas Compressor Unit
6. Rumen Kirilov Radkov - Mechanical Locksmith, Gas Compressor Unit
7. Georgi Avgoustinov - Electrical Fitter and Compressor Operator
8. Tsvetan Vassilev Radulov - Electrical Fitter and Compressor Operator

The main task of the emergency groups is to organize the liquidation of the consequences of accidents. The disclosure in the event of accidents at the well, gas flow-line, and at the site of the compressor workshop shall be made in accordance with the Schemes from Appendices 1, 2 and 3, an integral part of this Order.

If necessary, other specialists, equipment and techniques from those available at Chiren UGS should be involved in the activity of the emergency groups.

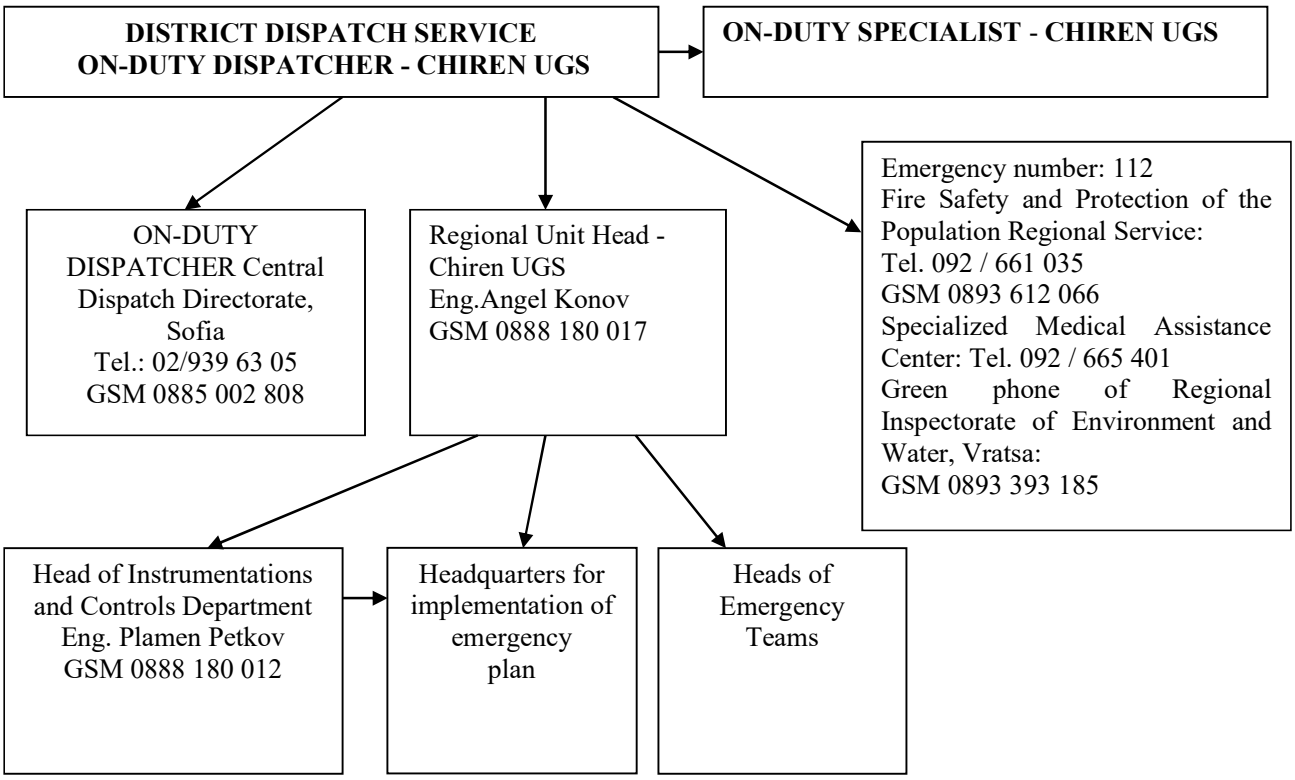
This Order cancels Order No. БТГ-ЕЧ-Зап.11/07.02.2022.
I will personally exercise control over the execution of the Order.

This Order to be brought to the attention of the responsible persons for information and execution.

ENG. ANGEL KONOV (Sgn.ill)
Regional Unit Head at Chiren UGS
Bulgartransgaz EAD
Seal of Bulgartransgaz EAD, Chiren UGS

Appendix No. 3

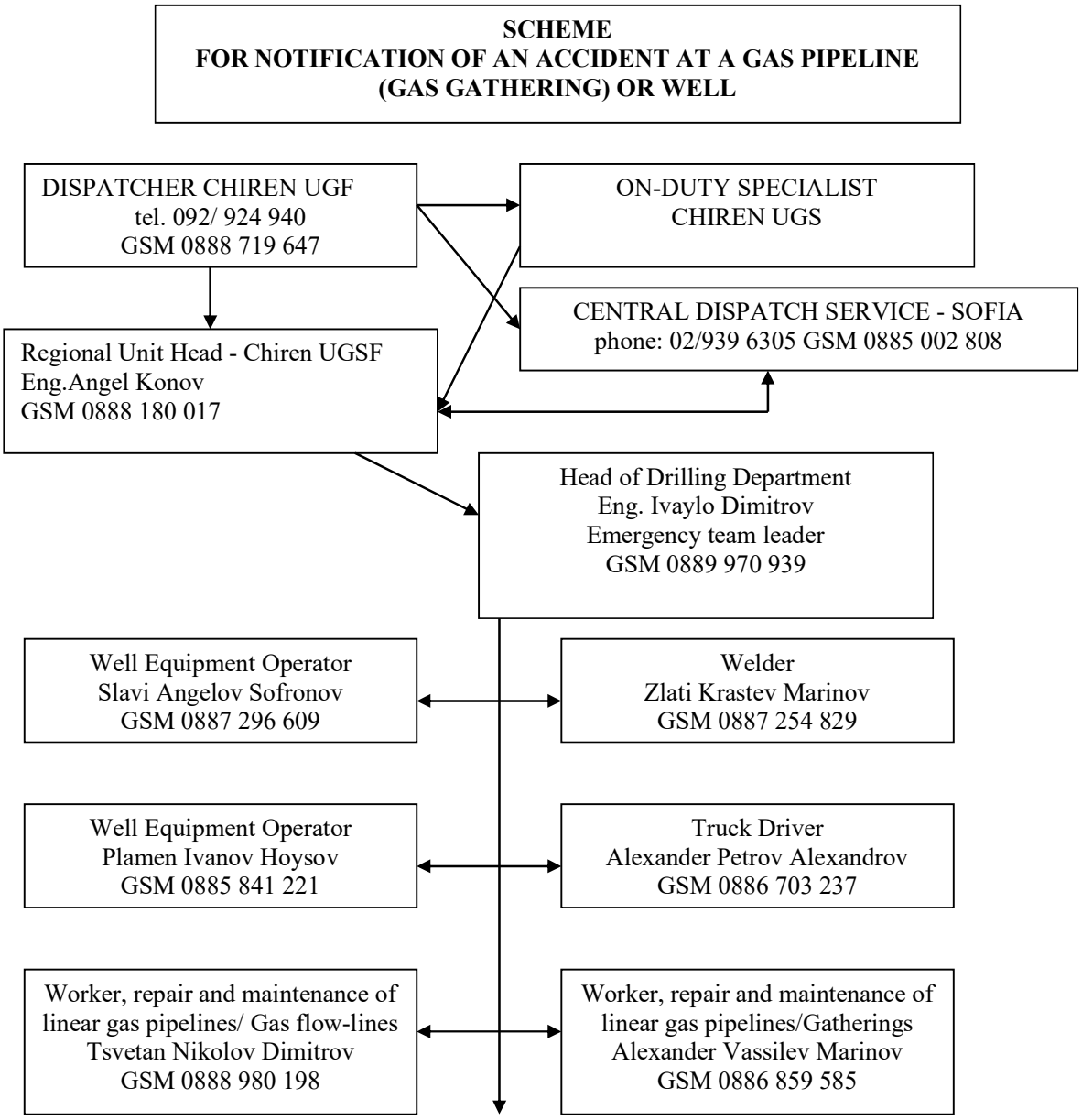
SCHEME
FOR NOTIFICATION OF EMERGENCY SITUATIONS



TELEPHONE NUMBERS FOR CONTACT WITH BULGARTRANSGAZ EAD - CHIREN UGS

Round-the-clock Regional Dispatch Service - Chiren UGS:
On-duty dispatcher phones: 092 / 924 940, 02 / 939 6247
Fax: 092/924 042
Mobile: 0888 719 647
On-deputy Operator phone: 0889 966 190

Administrative Management - Chiren UGS:
Head of Regional Unite - phone: 02 / 939 6483; fax: 092 / 924 968
Mobile: 0888180 017
Head of the Instrumentation and Controls Department - phone: 02 / 939 6289
Mobile: 0888 180 012


SCHEME
FOR NOTIFICATION OF AN ACCIDENT AT A GAS PIPELINE
(GAS GATHERING) OR WELL
DISPATCHER CHIREN UGF
tel. 092/ 924 940
GSM 0888 719 647
ON-DUTY SPECIALIST
CHIREN UGS
CENTRAL DISPATCH SERVICE - SOFIA
phone: 02/939 6305 GSM 0885 002 808
Regional Unit Head - Chiren UGSF
Eng.Angel Konov
GSM 0888 180 017
Head of Drilling Department
Eng. Ivaylo Dimitrov
Emergency team leader
GSM 0889 970 939
Well Equipment Operator
Slavi Angelov Sofronov
GSM 0887 296 609
Welder
Zlati Krastev Marinov
GSM 0887 254 829
Well Equipment Operator
Plamen Ivanov Hoysov
GSM 0885 841 221
Truck Driver
Alexander Petrov Alexandrov
GSM 0886 703 237
Worker, repair and maintenance of linear gas pipelines/ Gas flow-lines
Tsvetan Nikolov Dimitrov
GSM 0888 980 198
Worker, repair and maintenance of linear gas pipelines/Gatherings
Alexander Vassilev Marinov
GSM 0886 859 585

SCHEME FOR DISCLOSURE OF AN ACCIDENT AT THE COMPRESSOR WORKSHOP

<table>
<tr><td>DISPATCHER - CHIREN UGS
tel. 092/ 924 940
GSM 0888 719 647</td><td></td><td colspan="2">ON-DUTY SPECIALIST
CHIREN UGS</td></tr>
<tr><td rowspan="2">Regional Unit Head - Chiren UGS
Eng.Angel Konov
GSM 0888 180 017</td><td rowspan="2"></td><td colspan="2">CENTRAL DISPATCH SERVICE - SOFIA
phone: 02/939 6305 GSM 0885 002 808</td></tr>
<tr><td colspan="2">Eng. Evgeni Petkov -
Head of Energy Department
Deputy Head of Emergency Group
GSM 0888 180 017</td></tr>
<tr><td>Head of Instrumentations and Controls Department
Eng. Plamen Petkov
GSM 0888 180 012</td><td></td><td colspan="2">Eng. Sergey Yordanov Kutov -
Technologist, Gas Compressor Unit
Deputy Head of Emergency Group
GSM 0885 216 172</td></tr>
<tr><td>Steliyan Petkov Benchev - Mechanical Locksmith, Gas Compressor Unit
GSM 0882 545754</td><td>Mihail Todorov Davidov - Mechanical Locksmith, Gas Compressor Unit
GSM 0887 179 420</td><td>Georgi Petrov Georgiev - Mechanical Locksmith, Gas Compressor Unit
GSM 0886 009 711</td><td>Georgi Avgoustinov - Electrical Fitter
GSM 0898 424 056</td></tr>
<tr><td>Rumen Kirilov Radkov - Mechanical Locksmith, Gas Compressor Unit
GSM 0882 593 906</td><td>Rumen Dacov - Mechanical Locksmith, Gas Compressor Unit
GSM 0887 514 289</td><td>Toni Hristov Ivanov - Mechanical Locksmith, Gas Compressor Unit
GSM 0884 626 416</td><td>Tsvetan Vassilev Radulov - Electrical Fitter
GSM 0898 476 413</td></tr>
</table>

Appendix No. 4

P R O C E D U R E

FOR THE INTERACTION WITH EXTERNAL UNITS AND STRUCTURES

carrying out the interaction	**Interaction Units**	Region/Municipalities
Dispatcher on duty from the Regional Dispatch Service Regional Unit Head; On duty specialist, Chiren UGS Heads of emergency groups Members of the Emergency Plan Implementation Headquarters	Units of the MoI: - Fire Fighting and Protection of Population Regional Service, the town of Vratsa - Regional Police Directorates Emergency medical care Regional Department State Technical Surveillance Inspectorate Regional Inspectorate of Environment and Water - Vratsa Mayors in the populated areas Management teams of specialised repair and other activities companies Coordination Centre of the State Agency for National Security	**Vratsa** Vratsa Krivodol

Appendix No. 5

TELEPHONES CONNECTING CORE UNITS

OF THE UNIFIED RESCUE SYSTEM

National line for signals: *112*

NO	(NAME AND SURNAME)	POSITION	TELEPHONES	
			Official/ /mobile	
REGIONAL SAFETY COUNCIL				
	ON DUTY		092/ 621 172	
REGIONAL SAFETY COUNCIL				
	ON DUTY	**VRATSA**	092/ 623000	092/ 624603
		KRIVODOL	0879/396926	09117/2530
	MAYOR OF CHIREN VILLAGE		0887/900 354	
GREEN PHONE OF THE REGIONAL ENVIRONMENT AND WATER INSPECTION - VRATSA FOR REPORTING ENVIRONMENTAL POLLUTION			(092) 629 211 (FROM 9:00 A.M. TO 5:30 P.M. EVERY WORKING DAY); 0893 393 185 (DURING OFF-HOURS).	
Upon receipt of an alarm of a planned or committed terrorist act				
	Coordination Center of the State Agency for National Security		02/8147 069 or 02/8147 125	
	Head of Security of Critical Infrastructure Department of Bulgartransgaz EAD		0886/ 323999	
FIRE SAFETY AND PROTECTION OF THE POPULATION REGIONAL OFFICE – VRATSA				
	SINGLE NUMBER FOR EMERGENCY CALLS	ON DUTY	**112**	
	FIRE SAFETY AND PROTECTION OF THE POPULATION REGIONAL OFFICE VRATSA	ON DUTY	092/ 661035 0893/ 612066	

HEADQUARTERS RESPONSIBLE FOR THE IMPLEMENTATION OF THE EMERGENCY PLAN		
Chairman	Dipl. Eng. Angel Konov	0888/ 180017
DEPUTY CHAIR	Dipl. Eng. Plamen Petkov	0888/ 180 012
Member	Dipl. Eng. Kostadin Apostolov	0885/ 216126

Appendix No. 6:

L I S T

OF MATERIALS, INSTRUMENTS AND INVENTORY REQUIRED FOR THE REPAIR AND RESTORATION WORKS

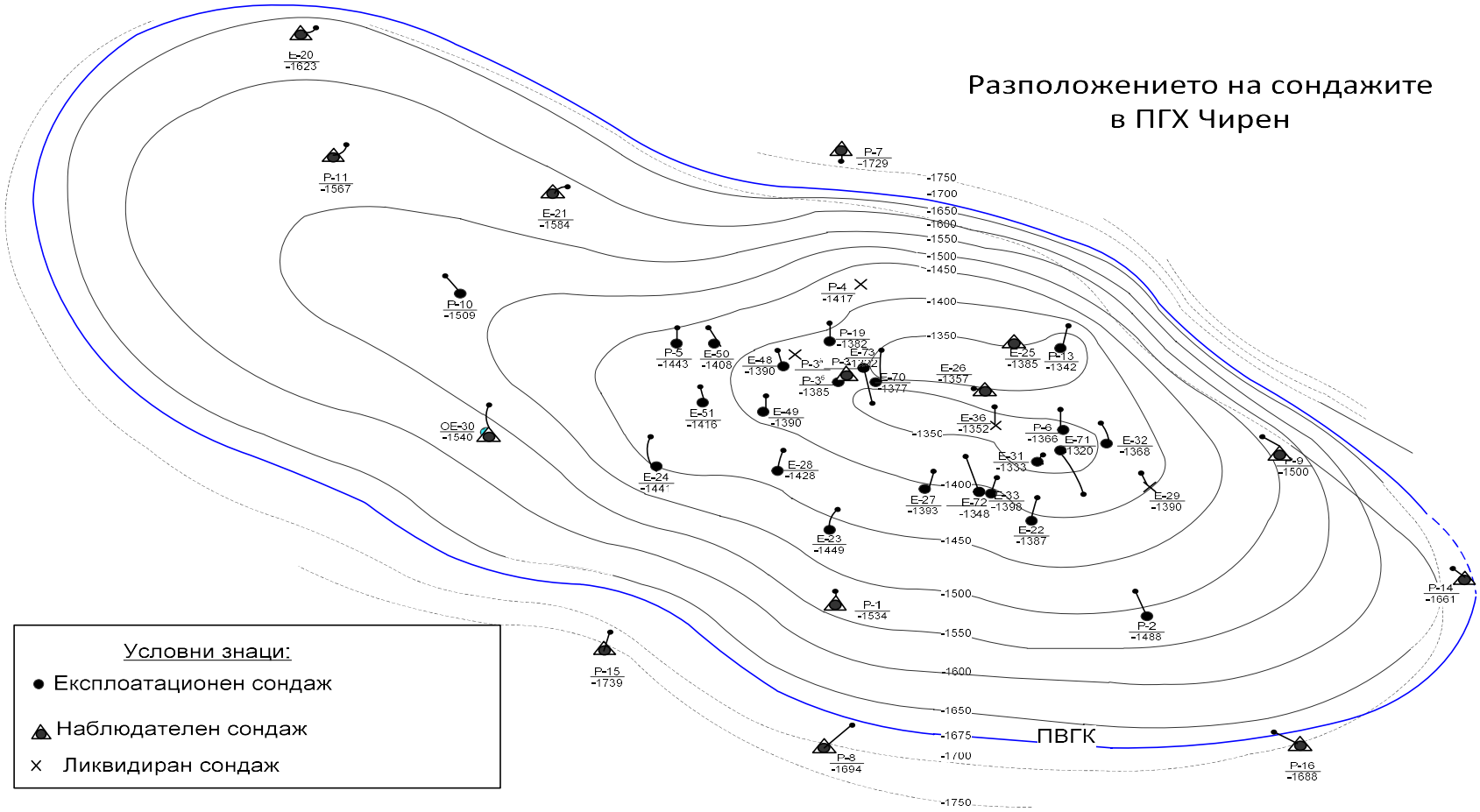
No	N a m e	
1.	**Means for cut-off and warning**	
	– ropes	**2 pcs.**
2.	**Instruments for earth works**	
	– straight shovels	**3 pcs.**
	– bent shovels	**2 pcs.**
	– picks	**2 pcs.**
	– steel levers	**1 pcs.**
3.	**Means and instruments for the preparatory works**	
	– water pump electric	**1 pcs.**
	– insulation stripping knife	**1 pcs.**
4.	**Locksmith instruments**	
	– Locksmith hammer 500g	**1 pcs.**
		1 pcs.
	– Locksmith hammer 200g	**1 pcs.**
	– hacksaw bow	**2 pcs.**
	– hacksaw blades	**2 pcs.**
	– steel brushes	
5.	**Materials for sealing and insulation**	
	– tallow graphite filling	**3 kg**
	– lubricant for Russian valves	**10 kg**
	– takalamit with packing grease	**1 pc.**
6.	**Technical safety equipment**	
	- Fire blanket;	**1 pc.**
	– Fire extinguisher with foam	**2 pcs.**
	– Fire extinguisher powder, CO_2	**2 pcs.**
	– tarpaulin/leather gloves	**10 am**
	– complete first aid kit (suitcase)	**2 pcs.**

NOTE:

The persons included in the composition of the emergency groups must own and use working (suitable) personal protective equipment (anti-static safety shoes - halves and/or wholes, special anti-static work clothes, warm clothing sets - jacket + trousers for working in winter conditions, cloaks with a hood, helmets with earplugs, protective glasses, respiratory protection equipment - masks + filters (if necessary), gloves - tarpaulin, etc.) according to the requirements for the relevant position and the nature of the work performed.

APPENDIX No. 7

APPENDIX No. 8


Разположението на сондажите
в ПГХ Чирен
Условни знаци:
Експлоатационен сондаж
Наблюдателен сондаж
Ликвидиран сондаж
ПВГК
E-20 -1623
P-11 -1567
E-21 -1584
P-7 -1729
P-10 -1509
P-4 -1417
P-19 -1382
E-73 -1372
P-5 -1443
E-50 -1408
E-48 -1390
P-3' -1385
P-3" -1385
E-70 -1377
E-26 -1357
E-25 -1385
P-13 -1342
E-51 -1416
E-49 -1390
E-36 -1352
P-6 -1366
E-71 -1320
E-32 -1368
OE-30 -1540
E-24 -1441
E-28 -1428
E-31 -1333
P-9 -1500
E-27 -1393
E-72 -1348
E-33 -1398
E-29 -1390
E-22 -1387
E-23 -1449
P-1 -1534
P-14 -1661
P-2 -1488
P-15 -1739
P-8 -1694
P-16 -1688
1750
1700
1650
1600
1550
1500
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1450
1500
1550
1600
1650
1675
1700
1750

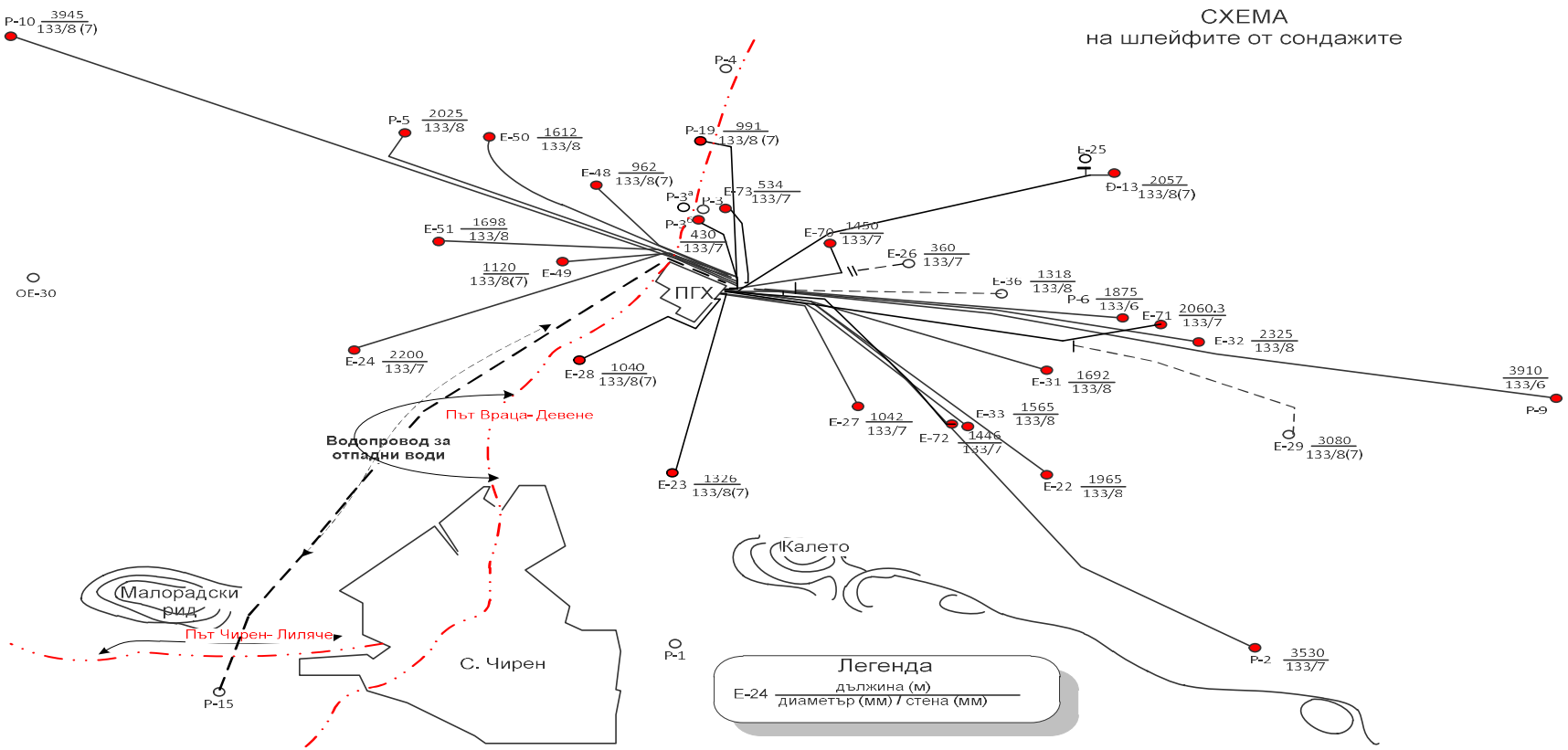


СХЕМА
на шлейфите от сондажите
Р-10 3945/133/8 (7)
Р-5 2025/133/8
Е-50 1612/133/8
Р-4
Р-19 991/133/8 (7)
Е-48 962/133/8(7)
Е-73 534/133/7
Р-3а
Р-3
Р-3б
Е-51 1698/133/8
430/133/7
Е-49
1120/133/8(7)
ОЕ-30
ПГХ
Е-70 1450/133/7
Е-26 360/133/7
Е-25
Ð-13 2057/133/8(7)
Е-36 1318/133/8
Р-6 1875/133/6
Е-71 2060,3/133/7
Е-32 2325/133/8
3910/133/6
Р-9
Е-24 2200/133/7
Е-28 1040/133/8(7)
Път Враца- Девене
Водопровод за отпадни води
Е-31 1692/133/8
Е-27 1042/133/7
Е-33 1565/133/8
Е-72 1446/133/7
Е-29 3080/133/8(7)
Е-23 1326/133/8(7)
Е-22 1965/133/8
Калето
Малорадски рид
Път Чирен- Лиляче
С. Чирен
Р-15
Р-1
Р-2 3530/133/7
Легенда
Е-24 дължина (м) / диаметър (мм) / стена (мм)

APPENDIX No. 9

Logo
BULGARTRANSGAZ

APPROVED BY:
VLADIMIR MALINOV (Sgn.ill)
EXECUTIVE DIRECTOR
SEAL OF BULGARTRANSGAZ EAD

ANNUAL SCHEDULE OF EMERGENCY AND FIREFIGHTING DRILLS OF BULGARTRANSGAZ EAD

	EMERGENCY DRILLS			**FIRE DRILLS**		
	Drill type (specialized action plan)	Place of conducting	Planned period of conducting	Drill type (specialized action plan)	Place of conducting	Planned period of conducting
Main office	Actions of EPIH in case of a terrorist act	Main office	10.2021	in case of fire Room No.13, Floor 2	Main office	04.2021
Chiren UGS	Actions of Emergency Group 1 outside working hours Training of UGS staff in the protection methods and ways of actions Training drill of Emergency Group in working hours	Main office Highly flammable liquids warehouse In different units	18.03.2021	Personal actions in case of fire Room No.13, Floor 2 Annual training on the methods of protection, ways of behavior and action in case of a fire Evacuation of the entire staff	Chiren UGS	14..01.2021

	Earthquake detected with of low magnitude	Emergency Group 1, E-28 Well	20.05.2021			
	Training drill. Through the Group for receiving and distribution of personal protective equipment, Sanitary Post, and Group for maintenance and operation of collective protective equipment, distribution of PPE to a part of the team (Instrumentation and Controls and Compressor services	Chiren UGS	10.09.2021	Practical action of Firefighting Cores. Actions in case of a fire in warehouse for materials and spare parts. Open-air oil warehouses, TEG, condensate and methanol in working hours.	Warehouse for materials and spare parts, Open-air oil warehouses, TEG, highly flammable liquids warehouse	07.07.2021
	Training drill (practical action of Emergency Groups). - Accident at a gas gathering	Emergency Group 1 Accident along a gas pipeline P-19 in working hours	23.11.2021			
NEOR - Valchi Dol	Action of the staff in case of accident	Transmission gas pipeline	05.2021	Action of the staff in case of fire	CS - Valchi Dol	07.2021

	Action of the staff in case of a terrorist threat	CS Valchi dol	11.2021	Action of the staff in case of fire	Pigging facility	09.2021
	Action of the staff in case of a terrorist threat	GRS Strashimirovo AGRS Targovishte AGRS Ruse Iztok	03.2021	Action of the staff in case of fire	GRS Novi Pazar GRS Devnya AGRS General Toshevo	06.2021

Fire drills - training evacuations in accordance with Ordinance No.8121h-647 of 01.10.2014 on the fire safety rules and standards in operation of sites or when implementing the specialized action plans in case of fire (emergency plans).

APPENDIX No. 10

BULGARTRANSGAZ

ORDER

No. БТГ-ЕЧ-Зап.-3

Chiren UGS, 12.01.2021

Pursuant to Art. 32, para. 2 and para. 3 of the Articles of Association of Bulgartransgaz EAD, according to Art. 6, para. 1, Item 1 of Ordinance No. 81213-647 of 01.10.2014 on fire safety rules and standards during sites' operation (promulgated SG, 89/28.10.2014), Instruction for ensuring fire safety in Bulgartransgaz EAD - ЗБР/ППБ-31- БТГ-СКИ, Order No. БТГ-92-04-140/14.08.2015 on holding regular training and induction to workers and employees, Plan for carrying out practical training and in connection with the Procedure of the integrated management system of Bulgartransgaz EAD - П-БТГ-4.4.7 - Emergency Preparedness and Responsiveness,

I APPOINT:

Fire-fighting units in administrative building and the area of Chiren UGS:

A. Fire-fighting unit at administrative building:
- Dipl. Eng. Georgy Goranov Ivanov
- Dipl. Eng. Nikolaiy Tomov Dryanovsky
- Robertino Andreev Kremenski
- Ignat Yordanov Ignatov

B. Fire-fighting unit at C&I and Automation:
- Henry Simeonov Iliev
- Alexander Tsvetanov Yolov
- Ventsislav Tsekov Karlov
- Sasho Atanasov Alexandrov
- Rosen Dimitrov Krusharski
- Milko Ivanov Georgiev

C. Fire-fighting unit at Repairs workshop - Compressor Workshop:
- Rumen Kirilov Radkov
- Tony Hristov Ivanov
- Stelian Petkov Benchev
- Georgy Petrov Georgiev
- Valery Vladinov Angelov
- Mihail Todorov Davidov

- Ivaylo Petrunov Tsvetkov

D. Fire-fighting group of electrical fitters:

- Valentin Georgiev Velkov
- Vladimir Ivanov Dimitrov
- Georgy Stoyanov Augustinov
- Tsvetan Vasilev Radulov

E. Fire-fighting unit in warehouse for highly flammable liquids:

- Kalin Detelinov Kostov
- Rumen Vassilev Datsov
- Nikolay Vasilev Petkov
- Tsvetan Nikolov Dimitrov
- Daniel Stoyanov Yordanov
- Georgy Lilov Todorov

F. Fire-fighting units of drivers, fitters, welders:

- Alexander Petrov Alexandrov
- Anatoly Dimitrov Yanchev
- Vladin Dimitrov Iliev
- Tsvetan Dimitrov Ivanov
- Zlati Krastev Marinov
- Ivaylo Petkov Velichkov
- Georgy Krasimirov Georgiev

This order repeals Order No. БТГ-ЕЧ-Зап.-143/05.12.2019.

I will personally supervise order execution.

This order should be brought to the attention of all responsible persons for information and implementation.

Appendix No. 1 - 7 /seven/ fire-fighting units is an integral part of this order.

DIPL. ENG. ANGEL KONOV
Head of Regional Unit
Chiren UGS, Bulgartransgaz EAD

ОД-ВТ-017, vO2

BULGARTRANSGAZ

APPENDIX 1 to Order ВТG-ЕЧ-Заповед БТГ-3/12.01.2021

MEMBERS OF FIREFIGHTING UNIT OF THE ADMINISTRATIVE BUILDING

No	Full name	Name
1	Eng. Georgi Ivanov	CO_2 fire extinguisher – 6 kg from the corridor of the second floor
2	Eng. Nikolay Dryanovski	ABC Powder fire extinguisher – 6 kg from the corridor of the first floor
3	Robertino Kremenski	CO_2 fire extinguisher – 6 kg from the corridor of the first floor
4	Ignat Ignatov	CO_2 fire extinguisher – 6 kg from the corridor in front of the archive room floor

MEMBERS OF FIREFIGHTING UNIT OF THE CONTROL AND INSTRUMENTATION BUILDING

No	Full name	Name
1	Henri Iliev	CO_2 fire extinguisher – 6 kg in front of the Control and Instrumentation Room
2	Ventsislav Karlov	ABC Powder fire extinguisher – 6 kg from the corridor of the first floor
3	Alexandar Yolov	CO_2 fire extinguisher – 12 kg from the OS
4	Ignat Ignatov	CO_2 fire extinguisher – 6 kg from the automation room

5	**Rosen Krusharski**	**ABC Powder fire extinguisher – 25 kg from the OS**
6	**Milko Ivanov**	**ABC Powder fire extinguisher – 12 kg from the board in front of the oil warehouse**

MEMBERS OF FIREFIGHTING UNIT OF THE ELECTRICIAN/OPERATOR GAS MOTOR COMPRESSOR

No	Full name	Name
1	**Valentin Velkov**	**CO_2 fire extinguisher – 6 kg from the first floor**
2	**Vladimir Dimitrov**	**Turns off the power supply**
3	**Georgi Avgustinov**	**CO_2 fire extinguisher – 12 kg from the first floor**
4	**Tsvetan Radulov**	**CO_2 fire extinguisher – 6 kg from the second floor**

MEMBERS OF FIREFIGHTING UNIT OF REPAIR GROUP OF COMPRESSOR WORKSHOP

No	Full name	Name
1	**Rumen Radkov**	**ABC Poweder fire extinguisher – 12 kg from the Compressor workshop**
2	**Valeri Angelov**	**ABC Poweder fire extinguisher – 12 kg from the machinery room**
3	**Stelian Benchev**	**ABC Poweder fire extinguisher – 12 kg from the oil storage**
4	**Toni Ivanov**	**ABC Poweder fire extinguisher – 12 kg from the machinery room**
5	**Georgi Georgiev**	**ABC Poweder fire extinguisher – 12 kg from the machinery room**
6	**Mihail Davidov**	**Turns on a line from the closest fire valve**
7	**Ivaylo Tsvetkov**	**ABC Poweder fire extinguisher – 12 kg from the machinery room**

MEMBERS OF FIREFIGHTING UNIT OF HIGHLY FLAMMABLE WAREHOUSE

No	Full name	Name
1	Kalin Kostov	Turns on the pumps and opens the fire valves
2	Rumen Dacov	Fire valves and lefete nozzles
3	Nikolay Petkov	Fire valves and lefete nozzles
4	Tsvetan Dimitrov	Fire valves and lefete nozzles
5	Daniel Stoyanov	Fire valves and lefete nozzles
6	Georgi Todorov	Fire valves and lefete nozzles

MEMBERS OF FIREFIGHTING UNIT OF FRIVERS, FITTERS, WELDERS AND ACTION PLAN

No	Full name	Name
1	Ivaylo velichkov	ABC Poweder fire extinguisher – 12 kg from the garages
2	Alexander Alexandrov	ABC Poweder fire extinguisher – 12 kg from the closed garages
3	Vladin Iliev	ABC Poweder fire extinguisher – 12 kg from the garages
4	Georgi Georgiev	ABC Poweder fire extinguisher – 12 kg from the workshop
5	Anatolyi Yanchev	ABC Poweder fire extinguisher – 12 kg from the garages
6	Tsvetan Ivanov	ABC Poweder fire extinguisher – 12 kg from the metal working shop
7	Zlati Malinov	ABC Poweder fire extinguisher – 12 kg from the welders shop

BULGARTRANSGAZ

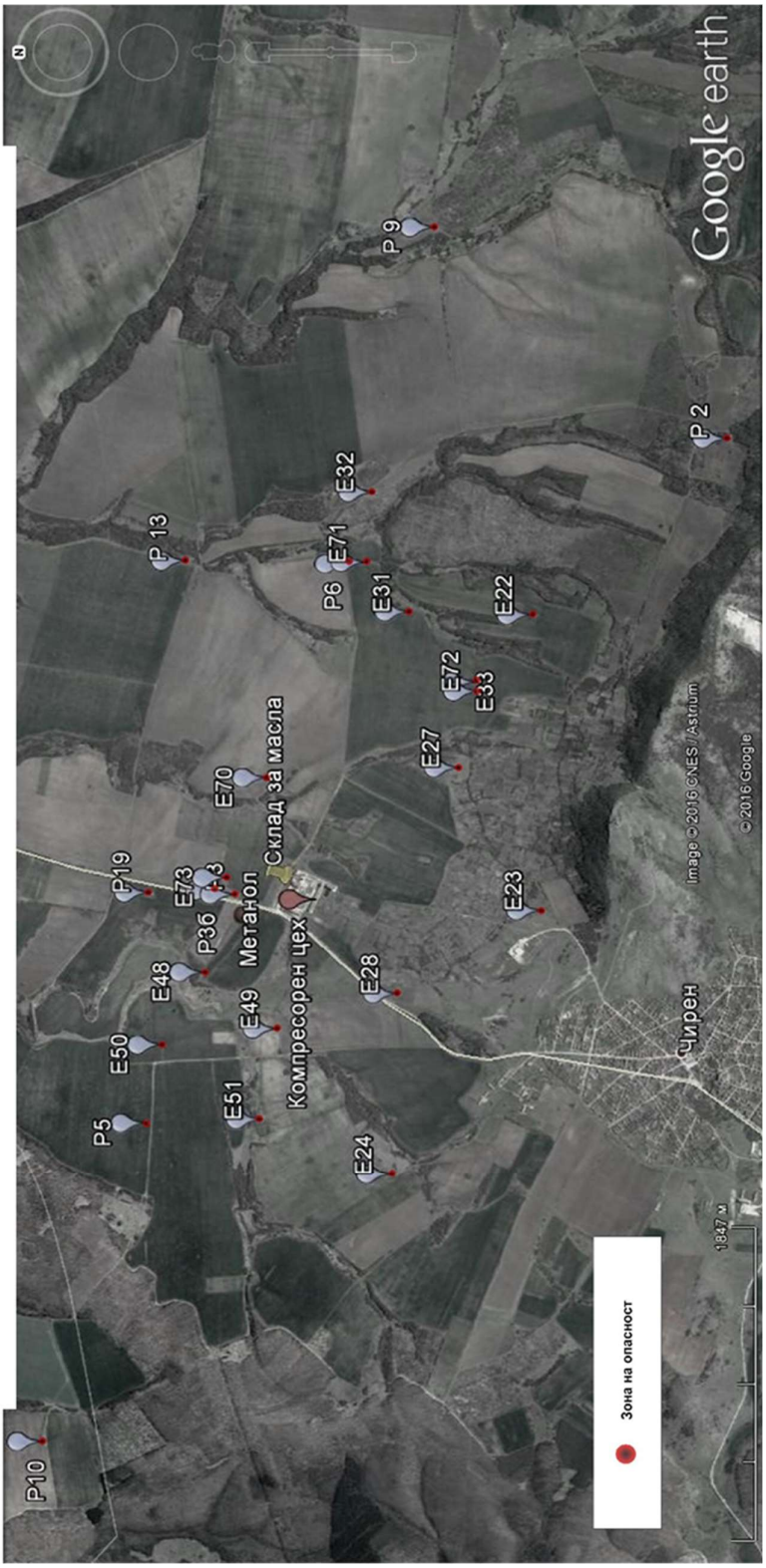
APPENDIX 1 to Order ВТG-ЕЧ-Заповед БТГ-3/12.01.2021

MEMBERS OF FIREFIGHTING UNITS AT WORK AND THEIR OBLIGATIONS

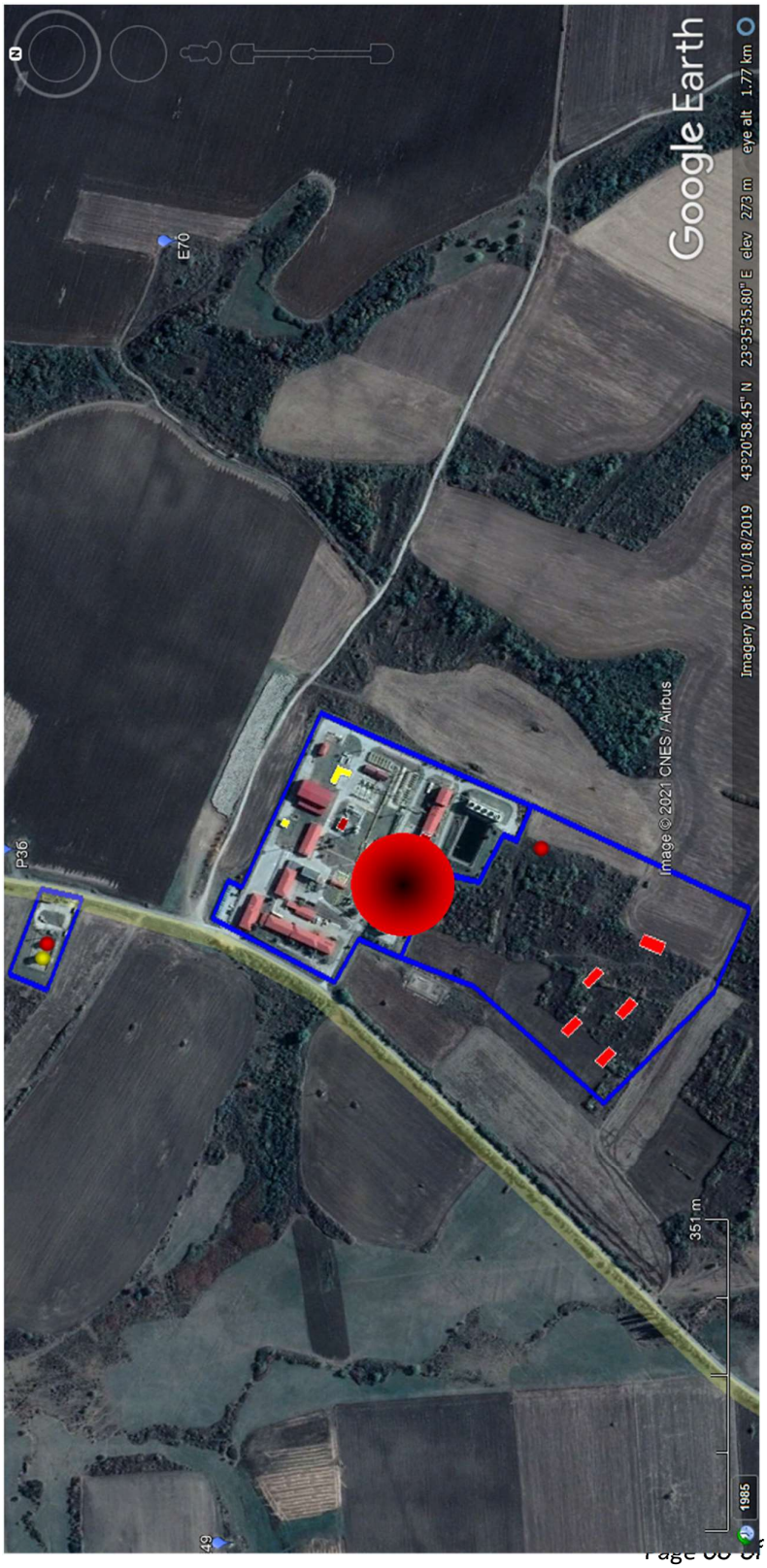
Position	What must they do in case of fire	In case of fire to act using the following fire fightning protection equipment
Dispatcher	Informs the management of Chiren UGS. Informs of Regional Unit – Vratsa at 160 or 112. Manages the staff during the extinguishing of fires and production failures	Monitors the work of the fire pumps, stops the gas flow, extinguishes with CO_2 fire extinguisher – 6 kg from the dispatcher room
Operator Gas motor compressor	Shuts down the running Gas motor compressors	ABC fire extinguisher 25 kg from the compressor room
Operator GTCU	Shuts down the running Gas turbine compressor units	Opens up the line to the closest fire valve or extinguishes fire with ABC Poweder fire extinguisher – 25 kg from the comressor room
Electrician-Operator-Comprssor	Shuts down power supply	ABC fire extinguisher 25 kg from the compressor room
Security	Informs the Regional Unit – Vratsa at 160 or 112. Oipens the gates to allow the fire fighting vehicles to come in	CO2 fire extinguisher – in front of the clearance access room

APPENDIX No. 11

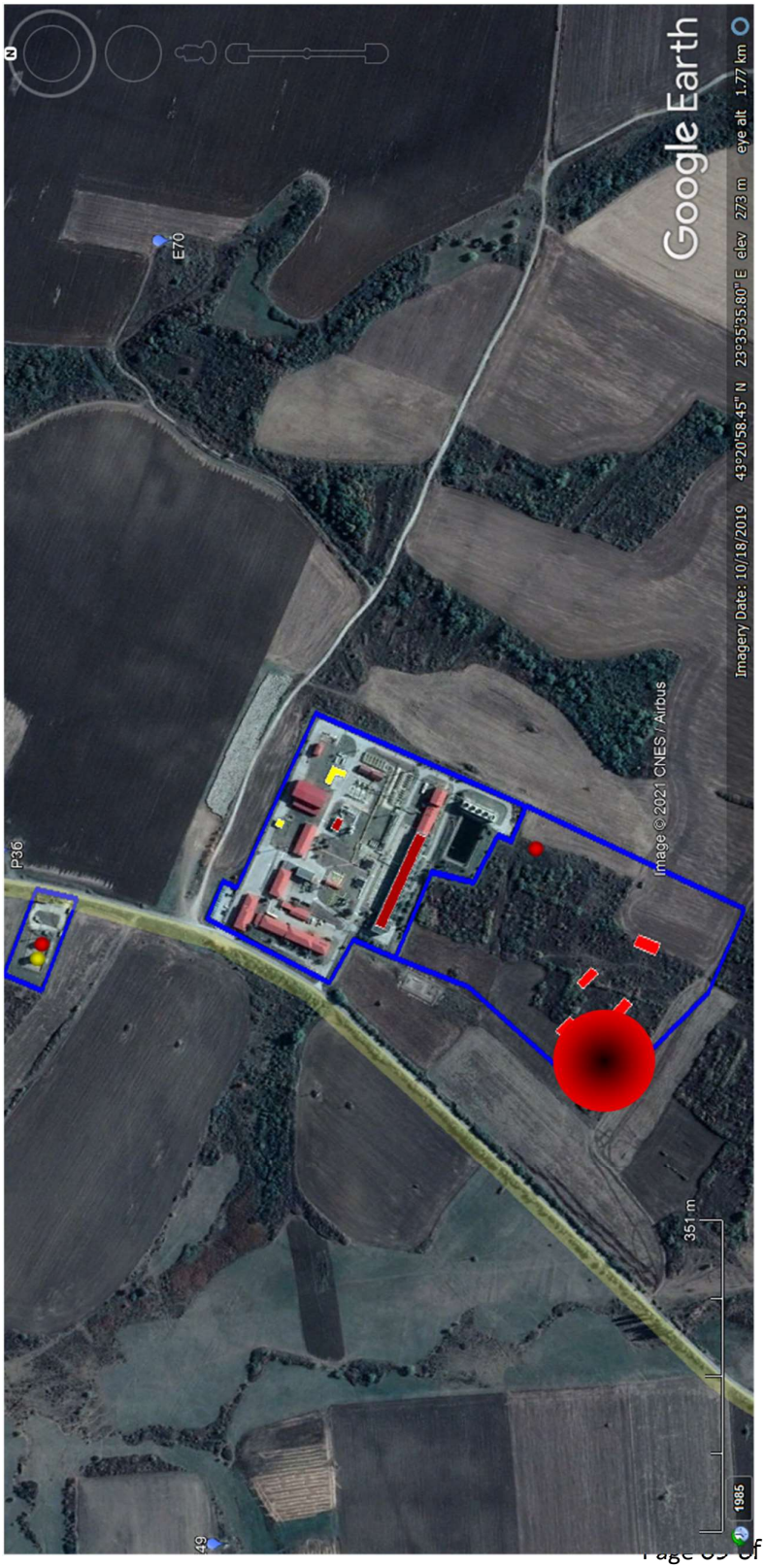
Зона на опасност при факелно горене при сондаж/шлейф



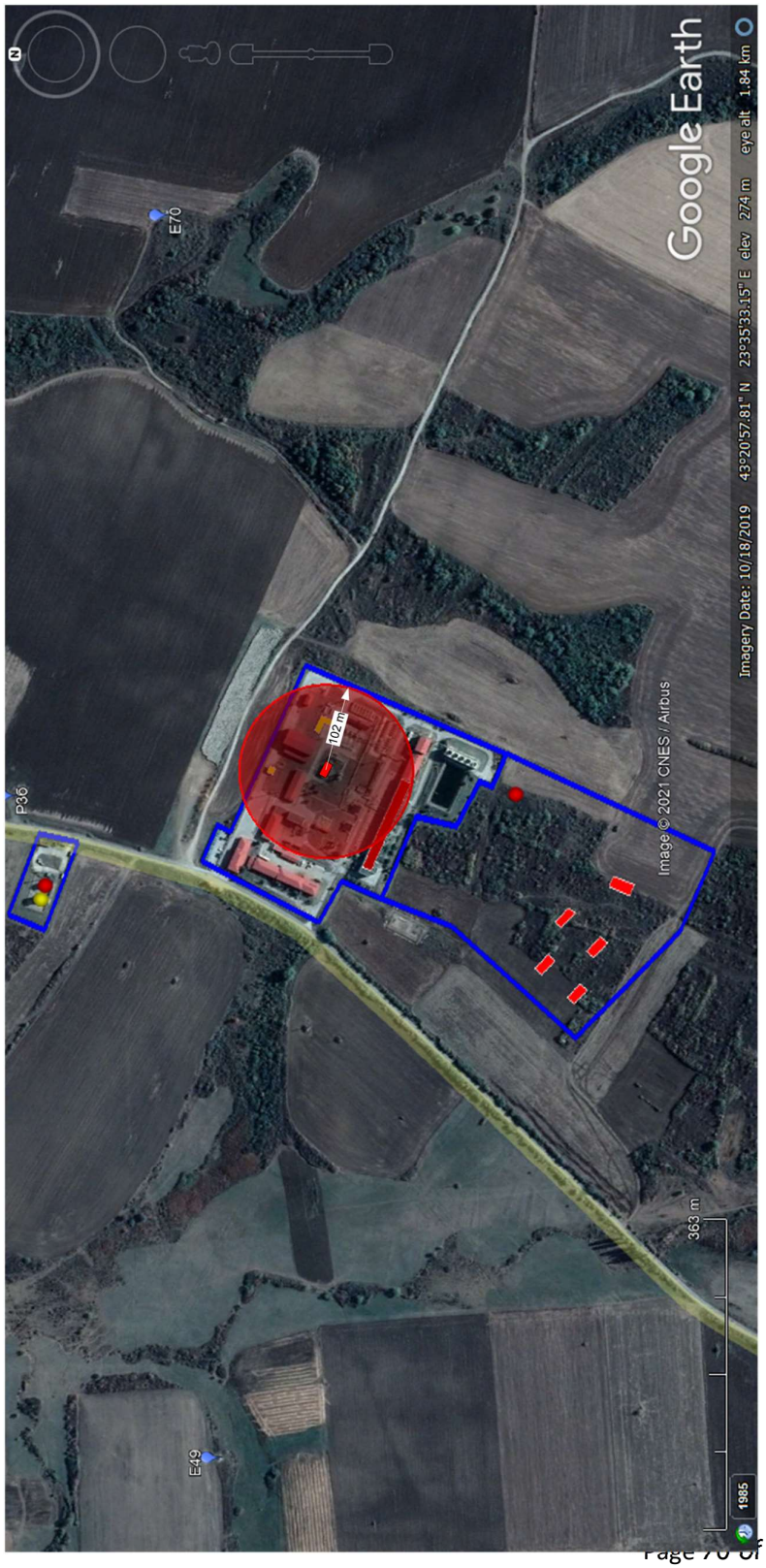
DANGER ZONE IN CASE OF FLARING IN AN EXISTING COMPRESSOR WORKSHOP



DANGER ZONE IN CASE OF FLARING CLOSE TO THE NEW COMPRESSORS

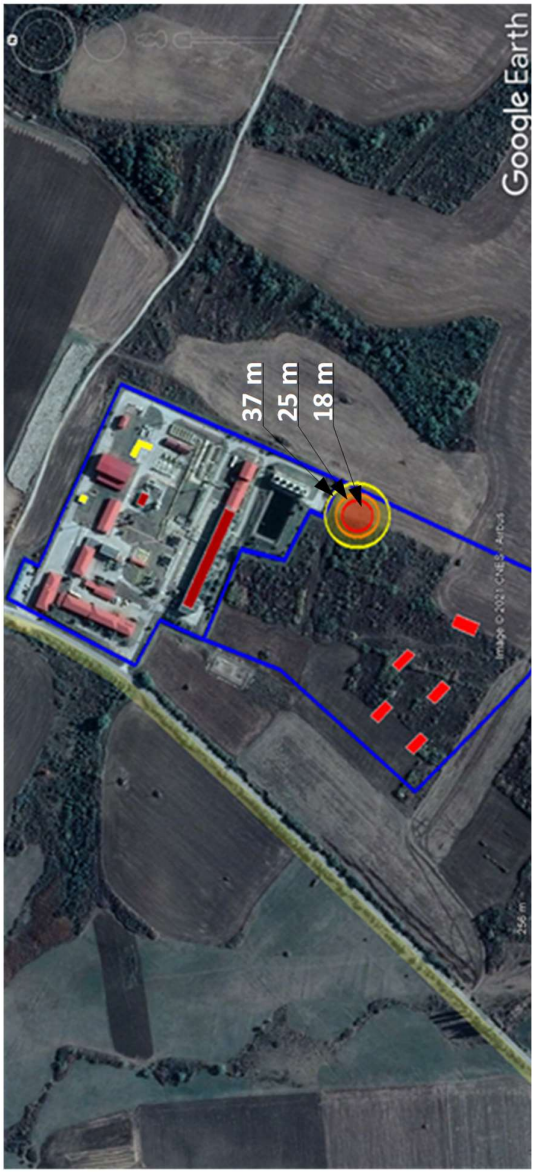


DANGER ZONE IN CASE OF FLARING IN THE EXISTING GAS DEHYDRATION INSTALLATION

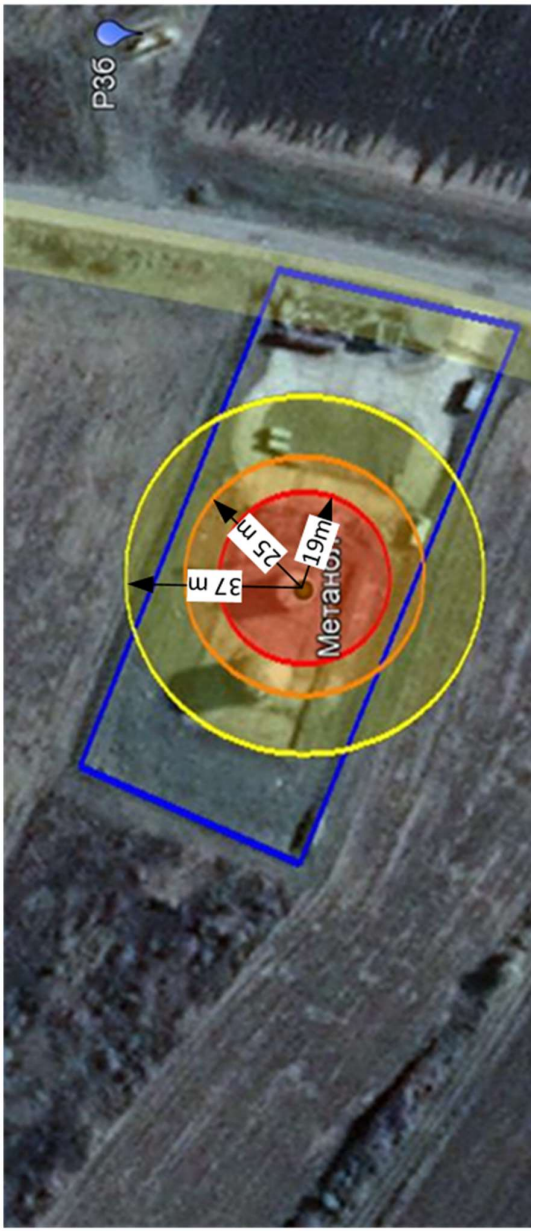


DANGER ZONE IN CASE OF FLARING IN THE NEW GAS DEHYDRATION INSTALLATION

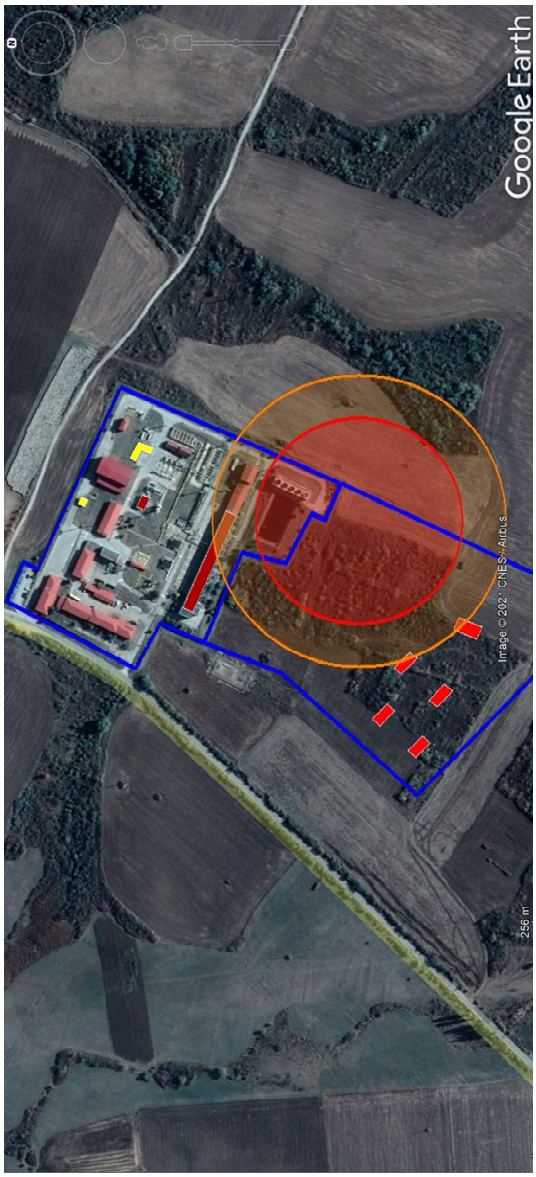
POOL FIRE OF A TANK STORING 23.7 T OF METHONOL



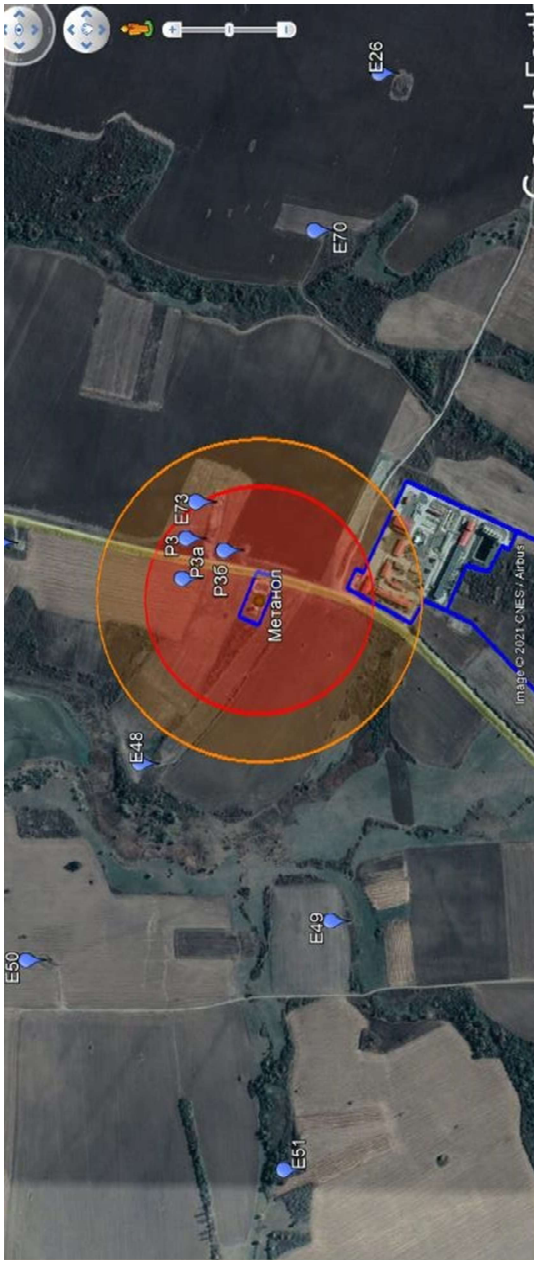
POOL FIRE OF THE TANK STORING 197.5 T OF METHANOL



Fireball of 23.7 t methanol - expansion of the production site



FIREBALL DAMAGE ZONES OF 197.5 T OF METHANOL - HIGHLY FLAMMABLE SUBSTANCES WAREHOUSE



APPENDIX No. 12

Chemical name	CAS No.	EU No.	Category/and danger according to Regulation (EC) No. 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) (OB, L 353/1 of 31 December 2008)	Classification according to Appendix No. 3 to article 103(1) of the Envirnmental Act	Design capacity of the technological equipment (In tonnes)	available Quantity (t)
Methanol	67-56-1	200-659-6	H225Flam. Liq. 2; H301 Acute Tox. 3 H311Acute Tox. 3 H331 Acute Tox. 3 H370 STOT SE 1	Part 2, separately listed, item 22 Part 1, Section P Section H	Existing highly flammable substance warehouse: - 1 tank 250 m^3: 197.5t, v04 Existing production site: - 1 tank 2 m^3: 1.58 t; - Feeding pipe ½: 0.45 m3, 0.36 t; On the new site within the IP: - 1 tank 30 m^3: 23.7 t	223.1
Diesel fuel	68334-30-5	269-822-7	H226, Flam. Liq. 3 H304, Asp. Tox. 1 H315, Skin Irrit. 2; H332, Acute Tox. 4; H351, Carc.2 H373, STOT RE 2; H411, Aquatic Chronic 2	Part 2, separately lisated item 34 (a) Part 1, Section P Section E	Existing corporate filling station: - 1 undergrpund tank: 5.2 m^3, 4.4t	4.4
Benzine	86290-81-5	289-220-8	H224 Flam. Liq. 1; H304 Asp. Tox. 1 H315 Skin irrit. 2;	Part 2, separately listed item 34 (в) Part 1, Section P Section E	Existing corporate filling station: - 1 underground tank: 17.4 m^3, 13.3 t	13.3

Chemical name	CAS No.	EU No.	Category/and danger according to Regulation (EC) No. 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) (OB, L 353/1 of 31 December 2008)	Classification according to Appendix No. 3 to article 103(1) of the Envirnmental Act	Design capacity of the technological equipment (In tonnes)	available Quantity (t)
			H336 STOT SE 3; H340 Muta. 1B; H350 Carc. 1B; H361 Repr. 2; H411 Aquatic Chronic 2			
Sealing lubricant for installation pipes	-	-	H319 Eye Irrit.2 H400 Aquatic Acute, 1 H410 Aquatic Chronic 1	Part 1, Section E, E1	In a fuel and lubricating materials storage facility to the corporate filling station: - in the original packings up to 0.2 t	0.2
Winter liquid for car windows	-	-	H225 Flam. Liq. 2	Part 1, Section P, P5в	In a fuel and lubricating materials storage facility to the corporate filling station: - in the original packings up to 0.2 t	0.007
Gas condensate	68919-39-1	272-896-3	H350 Carc. 1B; H340 Muta. 1B H304 Asp. Tox. 1	Part 2, separately listed item 34 (d)	Existing highly flammable substance warehouse: - 1 tank 525. 5 m^3, 413.7t - pipeline - from the existing production site to the highly flammable substance warehouse: 1.9 m^3, 1.5 t	415.2
Natural gas	8006-14-2	232-343-9	H220 Flam. Gas. 1	Part 2, separately listed, item 18 Part 1, Section P, P2	Following the implementation of the IP: Chiren Underground Gas Storage and Installation	2264 million

Chemical name	CAS No.	EU No.	Category/and danger according to Regulation (EC) No. 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) (OB, L 353/1 of 31 December 2008)	Classification according to Appendix No. 3 to article 103(1) of the Envirnmental Act	Design capacity of the technological equipment (In tonnes)	available Quantity (t)
					1.752 billion Nm^3 or 1 226 400 t.	
Waste with code 13 02 05* - Mineral-based non-chlorinated engine, lubricating and gear oils	-	-	HP 14/ H411 Aquatic Chronic 2	Part 1, Section E, E2	Site for preliminary storage of waste and in tanks to the facilities, with an expected amount of up to 18 t.	18
Waste with code 15 02 02* Absorbents, filter materials, wipes and protective clothing contaminated with hazardous substances	-	-	HP 14/ H410 Aquatic Chronic 1 H411 Aquatic Chronic 2	Part 1, Section E, E1/E2	Site for the preliminary storage of waste with a capacity of 0.6 t	0.6
Waste with code 16 06 01* Lead accumulator batteries	-	-	HP 14/ H410 Aquatic Chronic 1 H411 Aquatic Chronic 2	Part 1, Section E, E1/E2	Site for the preliminary storage of waste with a capacity of 1.35 t	1.35
Waste with code 16 06 02* Ni-Cd batteries	-	-	HP 14/ H410 Aquatic Chronic 1 H411 Aquatic Chronic 2	Part 1, Section E, E1/E2	Site for the preliminary storage of waste with a capacity of 0.015 t	0.015

Chemical name	CAS No.	EU No.	Category/and danger according to Regulation (EC) No. 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) (OB, L 353/1 of 31 December 2008)	Classification according to Appendix No. 3 to article 103(1) of the Envirnmental Act	Design capacity of the technological equipment (In tonnes)	available Quantity (t)
Waste with code 16 07 08* Waste containing oils and petroleum products	-	-	HP 14/ H410 Aquatic Chronic 1 H411 Aquatic Chronic 2	Part 1, Section E, E1/E2	It is stored in the facilities where the waste is generated with an amount of up to 16 t	16
Waste with code 20 01 21* - Fluorescent tubes and Other waste containing mercury	-	-	HP 14/ H330 Acute Tox. 1 (inhal.) H410 Aquatic Acute 1, H400, Aquatic Chronic 1	Part 1, Section H, H1 Section E, E1	Site for the preliminary storage of waste where up to 0.000004 *t* of mercury is possible to be present	0.000004