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Project: **THE DEVELOPMENT OF THE ROMANIAN GAS TRANSMISSION SYSTEM ALONG BULGARIA-ROMANIA-HUNGARY-AUSTRIA ROUTE, PODISOR – GMS HORIA AND 3 NEW COMPRESSOR STATIONS (JUPA, BIBESTI AND PODISOR) (PHASE 1)" (REFERENCE NUMBER IN EU LIST: 6.24.2)**

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THE NATIONAL GAS TRANSMISSION COMPANY TRANSGAZ S.A. Medias
THE DESIGN AND RESEARCH DIVISION

OCCUPATIONAL HEALTH AND SAFETY PLAN

PT no 1062 / 2015

In accordance with the GD 300/2006 on the minimum requirements for Occupational health and safety for the temporary or mobile construction sites Project preparation stage

Code -
(Site Code)

For the project:

` DEVELOPMENT ON THE TERRITORY OF ROMANIA OF THE NATIONAL GAS TRANSMISSION SYSTEM ON THE CORRIDOR BULGARIA - ROMANIA - HUNGARY - AUSTRIA ` LOT 4 – PIPELINE AUTOMATION AND SECURING

Responsible for the project
Liviu ANCAS

Table of contents

General data on the project

Project Number:	1062/ 2015
Phase:	FEED and Tender Book
Project Name:	`Development on Romanian territory of the National Gas Transmission System on the corridor Bulgaria - Romania - Hungary - Austria` - LOT 4 – Pipeline Automation and Securing
The Beneficiary (investor):	SNTGN TRANSGAZ SA
The specialty designer:	The Design and Research Division
The Project Manager :	
General Contractor:	
Phase:	Project preparation
Coordinator SSM:	Cozma Octavian

The main works under the project

1. Power equipment general technical conditions;
2. Power supply and distribution installations;
3. Valve station inner power installations and atmospheric discharge protection;
4. The automation system;
5. Cathodic protection data acquisition system;
6. Intrusion and fire integrated security management system;
   - The CCTV system (surveillance cameras);
   - Intrusion and access control system;
   - Fire monitoring system;
7. Sensitive optical fiber system;
8. The telecommunications system;

General information on the Occupational Health and Safety Plan

The Occupational Health and Safety Plan was drawn up in accordance with the most important national and European normative acts related to occupational health and safety, as follows:

1. Law 319/14.07.2006 on safety and health at work, published in O.J. 646/26.07.2006. The law transposes Council Directive 89/391/EEC published in the Official Journal of the European Communities (ECOJ) no L183/1989.
2. Government Resolution. 1425/11.10.2006 approving the detailed rules for the application of the provisions of Law 319/2006 on safety and health at work.

Decisions of Romania's Government transposingr the EU directive.

1. Government Resolution 1091/16 August 2006 on the minimum safety and health requirements for the workplace. The Resolution transposes Directive 1989/654/EEC, published in Official Journal of the European Communities (ECOJ) No 393/1989 L.
2. Government Resolution 1146/30 August 2006 on the minimum safety and health requirements for the use of the equipment by workers. The Resolution reflects Directive 1989/655/EEC, as amended by Directives 95/63/EC and 2001/45/EC published in Official Journal of the European Communities (ECOJ) 393/1989.
3. Government Resolution 1048/9 August 2006 concerning the minimum safety and health requirements for the use by workers of personal protective equipment at the workplace. The resolution reflects Directive 89/656/EEC, published in Official Journal of the European Communities (ECOJ) 393/1989.
4. Government Resolution 971/26 July 2006 on the minimum requirements for the signalling for the safety and health. The resolution reflects Directive 92/58/EEC, published in Official Journal of the European Communities (ECOJ) No 245/1992 L.
5. GR 300/2 March 2006 on the minimum health and safety requirements for temporary or mobile construction sites. The resolution reflects Directive 92/57/EEC, published in Official Journal of the European Communities (ECOJ) 245/1992 L.
6. Government Resolution 1875/2005 on the protection of the health and safety of workers from the risks related to the exposure to asbestos. The resolution reflects Directive 83/477/EEC, published in the Official Journal of the European Communities (ECOJ) 263/1983 L, together with all its amendments, that is Directive 91/382/EEC, published in ECOJ L 206/1991, Directive 98/24/EC, published in ECOJ L 131/1998 and Directive 2003/18/EC, published in ECOJ L 97/2003.
7. Government Resolution 493/12 April 2006 on the minimum health and safety requirements regarding the exposure of workers to the risks arising from noise. The resolution reflects Directive 2003/10/EC, published in Official Journal of the European Communities (ECOJ) L 42/2003.
8. Government Resolution 1.876/22 December 2005 on the minimum health and safety requirements regarding the exposure of workers to the risks arising from vibrations. The resolution reflects Directive 2002/44/EC published in Official Journal (ECOJ) 177/2002 L.
9. Government Resolution 1051/9 August 2006 on the minimum health and safety requirements for the manual handling of the masses, which poses a risk to workers, in particular dorso-lumbar diseases. The resolution reflects Directive 1990/269/EEC, published in Official Journal of the European Communities (ECOJ) L 156/1990.
10. Government Resolution no. 1.028/9 August 2006 on the minimum requirements for safety and health at work relating to the use of the display screen equipment. The judgment reflects Directive 1990/270/EEC, published in Official Journal of the European Communities (ECOJ) L 156/1990.

A. Scope

The Occupational Health and Safety Plan on the sites

B. Objectives

The objective of the Occupational Health and Safety Plan is to define the purpose, requirements and measures to be taken during the execution of the works and in the case of subsequent assistance operations. It will be used:

- To demonstrate that the project will implement a system for organizing the safety and health at work efficiently and consistently;
- To show how all hazards and effects on humans, property and the environment are identified, evaluated, controlled and mitigated;
- Notifying the constructors (contractors-subcontractors) with regard to the minimum safety and health requirements which will be imposed by the project.
- The establishment of a unitary framework for the implementation and the sequence of the initiatives of protection and health along the various stages of the construction activity.
- Specifying the mandatory requirement for all the constructors to have their own Plans for occupational health and safety at the sites and assessments of risks for all types of works they execute.

All parties are required to participate, to contribute to the future development of this Plan and to agree with the implementation of the latter.

All of the objectives of the project and the OHS Plan seek to achieve the design, construction and acceptance of the project with:

- Zero accidents;
- Minimum number of cases treated by medicine;
- Execution of the works without risks or with very reduced risks;
- Compliance with the applicable Romanian and European Union laws;

C. Definitions

For the purposes of this plan, the words and expressions below are defined as follows:

- ***Temporary or mobile site, hereinafter referred to as site*** - any construction site in which construction or civil engineering works are executed;
- ***The Beneficiary (investor)*** - any natural or legal person for which the work is executed and ensuring the funds necessary for achieving it;
- ***Project Manager*** - any natural or legal person authorized in accordance with the law and designated by the contracting authority to be responsible for the organization, planning and programming and control of the completion of the works on the construction site:, being responsible for the execution of the project within the stipulated quality, costs and deadlines;
- ***The designer of the works*** – any competent natural or legal person who prepares the design documentation at the request of the contracting authority;
- ***Construction supervisor*** - natural person designated by the Constructor to lead the execution of the works on the construction site and to monitor their achievement under the project;
- ***Constructor (Manufacturer, contractor, the tenderer)*** - any natural or legal person authority which carries out the construction works, based on a design at the order of the beneficiary;
- ***Work Accident*** – violent injury of the body as well as the acute occupational poisoning, which take place during the process of work or in the performance of their professional duties and which causes the temporary disablement of at least 3 calendar days, invalidity or death;
- **Occupational disease** - the disease which occurs as a result of the exercise of a job or profession,

caused by dangerous physical, chemical or biological agents from the place of work, as well as by overuse of the various components or systems in the working process;

- ***Occupation related disease*** - disease with multi-faceted determination, of which some determining factors are of professional nature;
- ***Professional equipment*** - any machine, apparatus, tool or installation used at work;
- ***Personal protection equipment*** - any equipment intended to be worn or handled by a worker to protect him against one or more hazards likely to endanger the safety and health at work, and any addition or accessory designed to meet this objective;
- ***Place of the jobs***- the place intended to include jobs, located in the premises of the factory and/or unit, including any other place within the area of the undertaking and/or factory to which the worker has access in the context of the activity;
- ***Serious danger and imminent danger of injury*** - the concrete situation, actual and current lacking the opportunity to trigger it to produce an accident at any time;
- ***Occupational health and safety*** - Assembly of the institutionalized activities aimed at ensuring the best conditions in the conduct of the working activities, defence of life, the integrity of the physical and mental health of workers and other persons participating in the working process;
- ***Dangerous Incident*** - identifiable event such as the explosion, the fire, hazard, technical accident, major emissions of noxious gases resulting from the dysfunctional character of an activity or equipment at the workplace and/or of the bad behaviour of the human factor which has not affected the workers, but it would have been possible to have such consequences and/or could have caused or produced material damage;
- ***Areas with specific and high risk*** - those areas in the facilities and/or units in which risks have been identified that may generate accidents or occupational disease with serious irreversible consequences, that is death or invalidity;
- ***An accident which produces temporary incapacity*** **of work** ***(ITM)*** - accident which produces temporary disablement of at least 3 consecutive calendar days, as confirmed by a medical certificate;
- ***An accident which produces invalidity (INV)*** - an accident which produces invalidity confirmed by the decision of employment in a degree of disability, issued by a rightful health unit;
- ***Deadly Accident (D)*** - accident as a result of which the injured person dies and the death is confirmed immediately or after a period of time, on the basis of a medical-legal document;
- ***Collective Accident*** - the accident in which at least 3 persons have been injured, at the same time and from the same causes, within the same event;
- ***Work Travelling Accident*** - accident occurred during the travels on public roads or generated by the road traffic, if the injured person is performing his/her duties at work;
- ***Working accident on the route*****:**
    - Accident occurred during and along the normal route for the travel to the place of work from home and vice versa and which has led to death or injury;
    - The accident occurred on the break period set for meals in the places organized by the employer, on the normal route for the movement from the place of work to the place where the meals are served and vice versa, and which has led to death or injury;
    - Accident on the normal route for the movement from the place of work to the place where they get the salary and vice versa, and which has led to death or injury;
- ***Invalidity*** - partial or total loss of the working capacity, as confirmed by the decision of employment in a degree of disability, issued by a rightful health unit;
- ***Obvious Invalidity*** - loss of working capacity due to serious injuries, such as an arm ripped from shoulder, as a result of an event, until the issue of a decision of employment in a degree of invalidity by a health unit;
- ***Acute occupational poisoning*** - pathological status occurred suddenly as a result of the exposure of the body to existing particular matter at the place of work;
- ***Duties of work*** -professional tasks laid down in: the individual labour contract, the internal rules or the rules of organization and functioning, job description, written decisions, written or verbal directions of the direct manager or by their chief superiors.

1. Introduction

1.1. Information on the project

The project is carried out in accordance with the Transgaz OHS requirements.

The necessary information for the preparation of the Occupational health and safety Plan are to be found in **Annex 1**.

Annex 1 covers the essential elements which are general information such as: **name and address of the beneficiary, the project manager, the constructors, contact persons, the number of workers on the construction site, the name of the person designated to manage the execution of the works (the project manager), the date of commencement and completion of the works, the duration of the works**, the summary of the project, the execution schedule, the location of the construction site and the conditions on the construction site.

1.2. The strategy for occupational health and safety

The strategy for occupational health and safety of the beneficiary is indicated in **Annex 2**.

1.3. Additional documents to be observed

- Environmental plan
- Regulation on the construction site
- Contract documents

2. The organization of the project and the responsibilities concerning the occupational health and safety

2.1. The organization of the project

The organization of the project is presented in **Annex 3.**

2.2. General responsibilities and obligations

On the construction site it is compulsory to wear protective helmets, safety footwear and clothing **visible from the distance**. Personal protective equipment appropriate for the works carried out will be ensured by the employer and used by the employees in accordance with the instructions received. **Within a week from the notification of this document all subcontractors will present the method for the remote identification of their workers in accordance with the form set out in Annex 18.**

2.3. The duties and tasks of the employers on the construction site

The employers have the obligation to consider all aspects of safety and health at work relating to the employees mainly regarding employers' responsibility as established in the national laws transposing Directive 89/391/EEC. Where an employer in the position of beneficiary or a project manager has appointed one or more coordinators for safety and health matters, he/she will not be exempted from her/his responsibilities in this area. The related costs are borne by the employer.

In order to ensure and maintain the safety and health of workers at the construction site, employers have mainly the following obligations:

- To comply with the general obligations of employers in accordance with the provisions of the national law transposing Directive 89/391/EEC;
- To meet and to monitor the compliance with the OHS Plan by all workers on site;
- To take the necessary measures in accordance with the minimum requirements laid down;
- To take account of the indications of the coordinators in the field of safety and health or those of the site supervisor and to carry them out throughout the period of the execution of the works;
- To inform the independent workers with regard to the measures to protect the safety and health which must be applied on the construction site and to make available to them adequate instructions;
- To draw up their own occupational safety and health plans and send them to the coordinators in the field of safety and health.
- In order to ensure the maintenance of safety and health on the construction site, when they themselves are running a professional activity on the construction site, employers must comply with the provisions of national legislation transposing the provisions of Directive 89/391/EEC relating to the obligations of the employees, equipment, personal protective equipment, and the recommendations of the coordinator(s) for safety and health at work.

In particular the employer will grant attention to the following tasks:

- Determination and assessment of risks and dangers, the definition and the documentation of the appropriate measures
- Information and training of employees
- Ensure the personal protective equipment
- Interrupt the activity and leave the area of work in the event of an imminent danger
- Personal information with regard to the existing situation regarding the techniques and the development of safety at work
- Collaboration in such a way that no one should not be put at risk
- The assessment of the level of qualification and of the weak points of the employees affecting the works
- The implementation of the general bases for the prevention of risks
- The coordination of the works in the case in which more than a labourer executes a work
- The provision of sufficient qualified staff for first aid
- The designation of workers to be in charge of the Safety and Health according to the legislation in force.

2.4. General duties and tasks of the employees

All employees have the obligation to comply with the indications and the instructions given by his/her employer in order to prevent risks and put in danger her/his own person or others. In addition, they have the obligation to report the risks of dangers, incidents and accidents as soon as they identify them.

In particular the employees have the obligation to comply with the following tasks:

- The application of the required protective measures
- The proper use of the means of work, tools, etc.
- Appropriate use of the personal protective equipment
- The proper use of the safety devices
- To avoid the her/his own endangering and of the others by the consumption of alcohol, drugs and medicine
- Report accidents and incidents
- Report of imminent and serious dangers for health and work
- Report the faults of the personal protective equipment and of the protective devices
- Appropriate removal of the faults according to the available information, instructions and technical methods.

2.5. The responsibilities of the staff of the construction site

The roles and responsibilities of Parties will be define on Work Statement document, one appendix of the Contract.

The representatives of Beneficiary and Contractor for health, safety, security and environment, will work to accomplish all attributes, on Contact point unit, under the coordination of HSSE deparment

The responsibilities of the Project Manager:

- To apply the general principles of prevention of risks at the place of work;
- To cooperate with the project coordinators for safety and health matters during the phases of the design and implementation of the works;
  - Take into account the remarks of the coordinators for safety and health matters recorded in the register of coordination;
  - To establish the general measures for safety and health requirements applicable to the site, in consultation with the project coordinators for safety and health matters;
  - To draw up a document for the practical collaboration with the project coordinators in the field of safety and health.

When carrying out the works on the construction site more contractors are participating, a constructor and one or more subcontractors, a constructor and self-employed persons or more self-employed persons the contracting authority and/or the project manager must designate a coordinator for safety and health matters during the execution of the works.

In order to be able to carry out their duties, project coordinators for safety and health matters must:

- Participate in all stages of the project implementation and execution of the works;
- Be invited to all meetings related to the drafting of the project and the completion of the works;
- Receive and, if necessary, to request the project manager and the constructor the necessary elements for the performance of its tasks;
- To draw up and keep up to date the register of coordination in accordance with the model indicated in **Annex 19.**

The responsibilities of the OHS coordinator during the project preparation stage:

- To coordinate the implementation of the OHS principles since the design phase, the study and project preparation stage. The project manager, the designer and, where appropriate, the beneficiary must take account of the general principles of prevention concerning the safety and health requirements laid down in the national legislation transposing Directive 89/391/EEC, in particular as regards: the choosing of the architectural, technical and/or organizational aspects in order to plan the various stages of the works which are to take place simultaneously or in succession, the estimated time required for completing such works or work stages.
- During the design phase, study and project preparation stage, account must be taken, whenever necessary, of all occupational safety and health plans and of files drawn up;
- To draw up or to require to be drawn up under her/his command a safety and health plan, setting out the rules applicable to the construction site concerned and taking into account the exploitation activities which take place within this site;
- To prepare a file of subsequent intervention operations adapted to the characteristics of the project containing aspects relevant for safety and health matters which should be taken into account during any subsequent works;
- To adapt the OHS Plan to each change made to the project;
- To transmit the elements of the OHS Plan to all those with responsibilities in this field;
- To open a register of coordination and to supplement it;

- To transmit to the OHS Plan register, the coordination and the subsequent intervention operations of the contracting authority and/or project manager and the coordinator for safety and health matters during the execution of the work;
- To participate in the meetings organized by the contracting authority and/or the project manager;
- To establish, in collaboration with the contracting authority and/or the project manager, general safety and health requirements applicable to the site;
- To harmonize the plans for their own safety and health requirements of the contractors with the OHS Plan of the site;
- To organise the coordination between the design engineers;
- To take account of all potential interference of the activities on the construction site.
- The coordinator for safety and health matters during the project preparation stage must have the necessary competence for the exercise of the job:
  - Professional experience of at least 5 years in architecture, construction or site management;
  - Specific training as coordinator for safety and health matters, updated every 3 years.

The responsibilities of the coordinator in the field of occupational safety and health during the execution of the works

- To coordinate the implementation of the general principles of prevention and safety at the choice of the technical solutions and/or organizational aspects in order to plan the various items or stages of work which are to take place simultaneously or in succession and the estimated time required for completing such works or work stages;
- To coordinate the implementation of the measures required in order to ensure that employers and, where appropriate, self-employed persons must obey the OHS principles, in a consistent and responsible manner, and apply the OHS Plan;
- To adapt or to request any adaptations of the security plan to be carried out and of the file of subsequent intervention operations, depending on the progress of the works and of any changes which have occurred;
- To organize the cooperation between employers, including of those in the following shift and the coordination of their activities on the protection of workers, the prevention of accidents and occupational risks which may affect the health of workers, mutual information and information for workers and their representatives and, where appropriate, provision of self-employed workers;
- To coordinate the activities aimed at the correct application of the instructions of work and the occupational safety;
- To take the necessary measures to ensure that only the authorised persons have access on the site;
- To establish, in collaboration with the project manager and the constructor, the general measures applicable to the construction site;
- Take into account all the interference of the activities of the perimeter of the site or in the vicinity thereof;
- To establish, together with the constructor, the obligations on the use of the collective means of protection, use of cranes, access on the site;
- To carry out the common visits on site with each contractor or subcontractor, before they draw up their own occupational OHS Plan;
- To endorse the occupational OHS plans developed by contractors and any amendments thereto.

The responsibilities of the coordinator for installation and of the coordinator for commissioning:

- The coordination of the tasks to be carried out in a safe manner and within the set deadline;

The responsibilities of the authorized personnel related to the work permit:

- To issue the work permit
- To withdraw the work permit

- Manage and implement all safety procedures in accordance with the system for work permits

The model of the work permit can be found in the **Annex 15**, `Template of the work permit`.

The responsibilities of the supervisor/ worker responsible for the safety at work at the points of work:

- To ensure that the regulations and the occupational safety requirements on the construction site are observed by the staff of the subcontractors (implementation of the occupational OHS Plan according to the type of work).
- Cooperation with the General Site Manager, with the person responsible for safety and health at work on the construction site and with the officials responsible for the security in the workplace and supervisors to the other companies on the construction site in matters of the protection of the safety and health at work.
- The reporting of the General Site Manager of the construction site with regard to the injury/incidents
- To make sure that the equipment and materials may be used safely.

The responsibilities of all those who are present on the construction site:

- To comply with the requirements of occupational safety and health, e.g. the occupational health and safety plan
- To use the personal protective equipment
- To announce the management in the event of danger, accidents, incidents, deficiencies etc.
- Everybody to be aware of the fact that each person is responsible for her/his own safety and the safety of others on the construction site.

HIGHLIGHTS MEASURES

- The storage and operation under safety conditions of dangerous materials
- Hazrdoud materials should be labelled with the appropriate internationally recognised diamond shaped hazard symbol
- Chemicals with different hazard symbols should not be stored together
- In case of using penetrating radiations (radiography) as method for the non-destructive control of the pipes welding, their level is low, being classified within admitted limits, and no additional protection measures being required, except for the ones taken by the specialized laboratory. The owner of the laboratory shall have according to the contract the obligation to manage the radioactive sources according to the legislation in the nuclear activity field
- The acquisition of chemicals for which the supplier may provide the proof of their pre-registration with the European Chemicals Agency shall be pursued
- Reducing exposure times for people working near noisy machinery
- Provide workers with appropriate hearing protection

- The vehicle circulation speed shall be limited in correlation with the local factors. Vehicles will be driven at designated speed limits. Reduce the speed of the trucks and mega trucks when passing though localities
- Dust emissions due to road travel shall be minimized by regulating vehicle speed and watering roads (where required).
- Ensure worker vehicles are parked in designated areas to minimise any disruption to local communities
- Leave gaps in pipe stringing operations to coincide with access routes
- Generators and water pumps required for 24-hour operation will be super-silenced or screened/located as appropriate to reduce noise; Crane spindles, pulley wheels, telescopic sections and moving parts of working platforms will be adequately lubricated in order to prevent undue screeching and squealing; and, Where possible mains electricity will be used rather than generators.

- Fuel handling, especially bulk storage, will take place in secure bunded areas. Similar conditions will apply to lubricant oils, chemicals and liquid wastes. Should a spill occur, polluted soils will be cleaned up or removed for appropriate disposal. All wastes will be handled, stored and disposed of as per local regulations.Diesel and other potentially polluting liquids will be stored in appropriate containers, fitted with secondary containment. Fuel equipment shall be supplied by oil pump, and tanks with automatic alarms and shut off systems to be installed in all refueling areas. All areas to be checked prior to delivery to prevent overfill and spillage.
- Standard industry refuelling protocols should be followed. Vehicles maintenance to be undertaken on a purposely provided drip tray. Secondary spill containment to be provided wherever refueling or storage occurs. All materials to be properly contained for decanting with fill areas to contain any spillage during transfer
- The exchange of oils shall be done in specialized workshops
- The tires of the transport means shall be cleaned at the exit from the working areas, in case of use of public roads

3. The OHS laws applied to the project and works

3.1. Basic legal requirements

- The Constitution of Romania;
- The Labour Code;
- European Council Directive 89/391/1989;
- Law No. 319/2006 on occupational health and safety;
- The detailed rules for the application of the provisions of Law no. 319/2006 approved by GR 1425/2006;
- GR 300/2006 on the minimum health and safety requirements for temporary or mobile construction sites;
- GR 971/2006 concerning minimum requirements for safety signs/health at the place of work;
- The directions of the EC on the conformity of the goods supplied.

3.2. Legal requirements under the contract

The legislation regulations and standards to be applied, are listed in **Annex 7.**

3.3. Internal documents of the site/Project

- The FEED;
- The prior statement;
- The OHS Plan coordinator;
- Plans for the safety and health requirements of the contractors and subcontractors;
- The Coordination Register;
- The subsequent intervention operations file;
- Work permits;
- Instructions for occupational safety and health and work procedures.

4. General measures for the organization of the site

4.1. The demarcation of the site and the movement within the site:

The working areas must surrounded by warning tapes and signal panels will be positioned at the entrances within the perimeter of the site indicating:

- The obligation to wear personal protective equipment;
- The rules on line of safety and health at work must be complied with in the premises of the site;
- Risks of accidents specific to the working area

The movement within the site

The pedestrian circulation plan will be drawn up at the beginning of the works for each point of work by the supervisor on the line of safety and health at work, together with the representatives of the beneficiary and the contractor and will be improved over the work with the indications of the constructors.

The circulation paths, must be calculated, placed and arranged so that they can be used easily, in accordance with their intended purpose.

The circulation paths used by the workers in order to execute the works assigned to them must be maintained free, without irregularities, stable and solid so that the works to be carried out in a safe manner.

The emergency routes and exits must be clear at all times and lead by the most direct means possible to a safe area.

In the event of danger, all work stations should be able to be discharged quickly and as safely as possible for the workers.

The number, distribution and size of the emergency routes and exits are determined according to the use, equipment and dimensions of the site and the maximum number of persons that may be present.

During the night the circulation paths, ways of emergency and workstations must be artificially lit properly and sufficiently.

When on the circulation paths risky manoeuvres are executed (turns, lever back etc.) the vehicles or machines will be routed. The persons who are doing this should be placed in areas where they may be seen by the driver of the vehicle and can view the manoeuvring zone in such a way as to prevent access in the area of persons or other equipment. In the case of observation of a danger they will immediately signal and stop the handling / machine. The driver of the vehicle will start/resume manoeuvres only after having received a signal from the person who controls the operation.

The areas for the parcking of the motor vehicles will be signalled in an appropriate manner. The motor vehicles and equipment will be parked only in areas specifically provided for them. While parked these will have the engine stopped and will be properly secured (parking brake or locking method).

They will not leave the motor vehicles or machinery unattended with the engine running or the keys in contact.

It is expressly forbidden to handle motor vehicles or machinery by unqualified people.

4.2. The control of the access on the construction site and the procedure for the receipt of the personnel

The access of any visitors within the site is forbidden without the authorization from a person in the management of the site or the supervisor on the line of occupational safety and health at the level of the works.

Visitors that have obtained the agreement to enter the site will mandatorily wear personal protective equipment.

All companies will be obliged to inform the inspection post on all the persons who have their agreement for site access, they will take their personal data and inform the management of the site or the supervisor on the line of safety and health at work.

All contracting companies will be required to supply the lists of workers who are working on site.
Each person entering the site must know:

- The risks to which they are exposed (examples of risks by displaying);
- Conduct in the event of an accident (emergency phone numbers exhibited on the entry panel);
- The place where the first-aid is ensured.

The breach of the provisions mentioned above **will likely result in a provisional or definitive exclusion** of the guilty person or even of the guilty company. The decision of the exclusions provided for in this paragraph may be taken by the representatives of the contracting authority and/or by the supervisor on the line of safety and health at work.

4.3. The premises and facilities for the organization of the site

The organization of the construction site must satisfy all the conditions for occupational health and safety. The location on the territory of the site of temporary auxiliary constructions, of deposits, ramps for unloading, rest and catering premises, of installations and the social groups for workers must be in accordance with all the rules to ensure the safety and health at work.

The cabins, deposits of materials and equipment, parking lots of equipment/motor vehicles, the places of rest and serving meals, the points of the first aid should be placed in the areas of the site with the minimum risk. It is preferable for the works to be executed at a distance less than 10 m from the organization of the construction site. In the event that this requirement cannot be met, additional barriers will be constructed for security and security signals will be installed.

The circulation paths from the access to the site towards the organization of the site and from the organization of the site towards the site itself must be free of obstacles and not to present risks. The circulation paths for pedestrians will not intersect the auto traffic routes, otherwise, any crossovers will be signalled accordingly.

The following will be ensured and arranged:

A. The existence at each point of minimum one toilet will be ensured (cesspool type or green toilet), avoid their location in the immediate vicinity of access roads.

B. At each point of work rest rooms will be arranged (when the activity is interrupted and / or other situations which require this - measures provided for under GEO 99/2000 in periods with high extreme temperatures), areas for dining, they must be large enough and equipped with an adequate number of tables and seats corresponding to the number of workers and to provide shelter, having regard to the high temperatures which are recorded during the summer in the geographical area where the site is located (if appropriate, the existence of air conditioning is ensured).

These spaces may be barracks or closed tents, equipped with specific furniture, so that they may be used as spaces for workers to change their clothes and for their storage.

For storing the food and mineral water in a cool place (granted according to GEO 99/2000), spaces of rest/dining must be equipped with freezers.

C. In the vicinity of the rest/dining premises spaces for the workers to carry out their personal hygiene will be organized, suitably equipped with washbasins, shower with running water (minimum 20 litres/human), soap and towels.

D. For granting appropriate medical treatment in the event of accident or sickness of the workers, at each point of work spaces (barracks or tents) will be arranged as points of first aid, appropriately marked, equipped with a bed and standard first aid kit, which will be supplemented with the minimum required medication.

At the points of work, the constructor will ensure the presence of their own personnel trained for first aid (at least one person at each point of work) and, as the case may be, a crew specialized in the provision of medical emergency assistance, equipped with special a vehicle for the transport of the injured person to sanitary units, or contracts concluded with specialized units for the provision of medical assistance as a matter of urgency and for the transport of injured persons o the relevant health units.

All workers will be trained with regard to the conduct which must be taken in the case of an accident and to whom they should resort to.

E. For the prompt intervention in the event of the occurrence of a fire, a point of intervention will be organized, at each point of work, in the vicinity of the working areas fire equipped with fire extinguishers by powder and CO2 (at least 2 fire extinguishers P50, 6 extinguishers P10/ P6, 2 extinguishers G2/G6), flame retardant beds with accessories (ropes) to manipulate them from a distance, buckets, pickaxes, shovels.

The constructor will designate and train a team for rapid intervention against fire, made up of at least three persons for each place of work.

At the same time the constructor will notify in advance the firemen in the area in connection with the exact location of the points of work and the route on which they are to be moving.

For the materials which present a risk of fire additional measures will be taken for protection in accordance with the instructions of the producers (storage mode, maximum permissible temperatures, neighbourhoods etc.).

F. The storage of materials will be carried out in specially designed premises. They must be located on the territory of the site, taking account of the risks involved by the handling and storage of materials, as stipulated in the accompanying documents to the producers and the conditions of the impact on the environment (contamination of the soil, air, water, etc).

The chemical substances will be stored in separate premises (especially if they have incompatibilities with other materials).

The materials presenting a danger of explosion or fire (oxygen, acetylene, paints, thinners etc.) will be stored separately, in specially designed premises that will be appropriately marked and which will provide protection against uncontrolled movements of the recipients, against the solar rays and humidity.

Spaces of sufficient size for unloading, handling and storage of heavy materials will be ensured, in such a way as to ensure the freedom of movement and to avoid uncontrolled movement of the supplies.

It is recommended to avoid the storage of fuels on site. If the storage of fuels is necessary, apply special rules for the storage, mark the areas appropriately, secure them against solar rays and against unauthorised access.

In the storage rooms place fire-fighting equipment compatible with the type of stored materials (wood, oxygen, thinners, plastics etc).

The establishment of provisional storages, other than those made available through the facilities of the organization of the construction site, will be allowed by the project manager and the coordinator in the field of safety and health at work only after all the general and special security measures were taken.

G. Temporary electrical installations, used to power their technical equipment and to ensure the artificial lighting will be designed, executed, checked and maintained by qualified and authorised personnel.

They must not present a risk of fire or explosion and the workers are protected against the risk of shock either directly or indirectly.

All site electrical panels, regardless of the company that installs them and exploits them, must comply with the safety measures:

- Not to be locked;
- Not to be exposed to the weather (protected);
- Must be equipped with automatic systems for interruption of power supply in case of emergency (automatic and calibrated fuse);
- Must be related to the earthing system;

- Must be equipped with external sockets provided with protective covers and in perfect condition (not broken or not properly equipped);

Electrical wires which supply the site will be positioned (if appropriate, suspended) so that they will not be in danger of being hanged by the machinery moving in the area.

H. In order to ensure the maintenance of the construction site in good order and in a state of cleanliness, necessary for the safety of workers, the beneficiary must make available, at each point of work, a sufficient number of containers for separate collection of waste resulted from the technological processes and unsorted municipal waste and ensure their evacuation throughout the duration of the works.

Each constructor has a duty to ensure the cleaning in the area of work and to maintain access routes clean, will sort and carry by means of adapted equipment all wastes to the containers.

It is prohibited the collection and disposal of waste in the technological holes.

5. Assessment of the foreseeable risks

5.1. General concepts

With a view to the completion of a safe system for the execution of the works the following will apply:

The activities having a risk of accident or sickness are identified and risks will be assessed and work procedures will be drawn up. They will identify the safety measures during the works to be taken and the residual risks associated with the activity in question. The results will be used in the meetings for the coordination of the works for safety and health at work, short meetings of the training and the authorisation of the work permit and the staff will be trained before the commencement of the activities.

5.2. Risk assessments and Working procedures

The usual risk assessments:

- Risk assessments during the design;
- Risk assessments regarding site activities (general risks, the specific risks);
- Evaluation of hazardous substances for health.

The results of the risk assessment are presented in **Annex 8**.

The risk assessment defines and ranks the activities carried out depending on the level of risk. All activities on site will be carried out in such a way minimising risks. Activities involving even a remote risk will be carried out based on instructions and procedures (in particular in single cases) based on the `Work Permit`.

These procedures will be done within the framework of periodic training and verifiable valuation and that those in the event of changes. The content of working procedures for suppliers and/or subcontractors can be found in **Appendix 9.**

They will be supplemented by information suppliers and/or subcontractors as such.

5.3. Suppliers and/or Subcontractors

The suppliers and/or subcontractors have the obligation to prepare the risk analysis, the working procedures and the evaluation of substances and materials used in relation to the risks of their activities. The results will be reviewed before the start of the works on the construction site by the OHS consultant of the constructor and after their approval the necessary training will be conducted. Additional documents of the subcontractors are submitted within a maximum of one week after the notification of this document.

6. Measures to ensure the health and safety of workers

6.1. The minimum measures

The project manager, the supervisor in the field of health and safety as well as all the representatives of the suppliers and subcontractors on the construction site must act in such a way as to provide **the minimum safety and health requirements for work on the construction site** as follows:

Means of production

In order to prevent the risk of occurrence of certain events related to malfunctioning of the equipment of work: implements, electric, vehicles, special installations for penetration/cold tapping, compressors, equipment for the control of the welds, technical equipment - welding equipment, power tools and tools, gas cylinders with technological gas, MAB, etc., used by the constructors in the context of the project, the project manager must ensure that they are approved, correspond from a technical point of view, have checks/ periodic inspections carried out, and within a period of validity, are appropriate from a constructive point of view of for the technological processes to be executed.

For this purpose the project manager will require, in advance, the documents attesting the technical data of the equipment for the works, mentioned above (technical books, documents where the checks are mentioned / technical inspections, graphs of services and repairs).

The execution staff

In order to prevent the risks of injury caused by any human errors in the execution of the technological processes and/or the state of poor health of the workers, the project manager will request from the constructors the documents indicating that the workers they use, have the qualifications and the necessary authorizations (diplomas, professional certificates, licenses, etc),for the employment for the jobs at the construction site (e.g., homologated welders, crane operators, bulldozer operators, electricians, etc.). They are properly trained for the safety and health at work and have made the periodical medical supervision by the occupational medicine and they received the medical advice as apt for work.

At the same time the issue of the orders of work will be required, by the constructors, for each type of work to be executed on the site, which must comprise the name of the workers used, the positions occupied by them, the materials (working procedures, instructions for their own O.H.S, normative acts relating to P.S.I. and U.S.), which have been the subject of the supplementary training.

Stability and solidity

The materials, equipment and, in general, any component which, when moving in any way, may affect the safety and health of workers must be stabilized in an appropriate and safe manner. The access to any surface material which does not have a sufficient resistance is not allowed unless appropriate equipment or means are used so that the work is carried out in a safe manner.

Energy distribution installations

The installations must be designed, constructed and used so as not to present a risk of fire or explosion and the workers must be appropriately protected against the risk of electrocution caused by direct or indirect touching. At the design, construction and choice of the equipment and protection devices account must be taken of the type and power of the distributed energy, external conditions and the competence of persons who have access to parts of the installation.

Fire detection and fire fighting

Depending on the characteristics of the site, the size and use of the rooms, the site equipment, the physical and chemical properties of the substances of the present materials, and the maximum number of persons that may be present, an adequate number of appropriate fire-fighting devices must be provided and, if appropriate, a sufficient number of fire detectors and alarm systems.
The devices for extinguishing a fire, fire detectors and alarm systems must be checked and maintained on a regular basis. At regular intervals appropriate tests and exercises must be performed. Non-automatic fire-fighting equipment must be easily accessible and simple to use. They must be signalled by signs in accordance with the provisions of the national legislation transposing Directive 92/58/EEC. Signalling panels must be sufficiently resistant and placed in the appropriate places.

Ventilation

Having regard to the working methods used and the physical requirements related to the workers, measures must be taken to ensure that workers have sufficient fresh air. If a ventilation system is used, it must be maintained operational and must not expose workers to draught which may affect their health.
When it is necessary for the workers' health, a monitoring system should signal any incidental stop of the equipment.

Exposure to particular risks

Workers must not be exposed to harmful noise levels or to harmful external influences such as gases, vapours, dust. When workers have to enter an area where the atmosphere is liable to contain a toxic or harmful substance to have an insufficient oxygen level or to be inflammable, the confined atmosphere contaminated must be monitored and appropriate measures must be taken to prevent any hazards. In an enclosed space a worker may not in any circumstances be exposed to an atmosphere with high risk. The worker must at least be watched at all times from outside and all appropriate measures should be taken in order to be first aid, effectively and immediately.

Working Environment

During working hours, the temperature must be adequate for the human body, having regard to the working methods used and the physical demands to which workers are subjected to.

In order to ensure full traceability of safety and health at work on the construction site, the project manager will take account as well of the environmental conditions, therefore for:

- High temperatures, the existence on site of the tents and/or the parasols for homologated welders for any type is ensured and the measures established in GEO 99/2000 will be observed, alternating periods of work with rest periods in shaded places, ventilated, ensuring appropriate mineral water, 2-4 litres/person/shift, adequate personal protective equipment, showers.
- Exhaust emissions: noise (caused by machinery in operation, gas discharge from pipelines and installations)
- Infrared radiation and ultraviolet light (results during the process of electric welding) monitoring the equipping with personal protective equipment of workers who are exposed to these toxic fumes (external/internal ear muffs; masks, aprons, gloves gaiters for welding).
- Natural disasters (earthquakes, flood, tornado, land subsidence, breakdown trees, etc), will ensure that each constructor has designated workers trained properly on the mode of action and coordinate the activities of the rescue of persons and goods in emergency situations.
- Natural and artificial lighting of workstations, rooms and traffic routes on the site. Workstations, rooms and traffic routes must as far as possible have sufficient natural light. When daylight is not sufficient, and also during the night work places must be provided with appropriate and sufficient artificial lighting. When necessary,

portable light sources should be used that are protected against impact. The colour of artificial light used must not alter or affect the perception of signals or signposts. Lighting installations in rooms, workstations and traffic routes must be placed in such a way that there is no risk of accident to workers. Rooms, workstations and traffic routes where workers are exposed to risks in the event of disruption of the functioning of the artificial lighting must be provided with emergency lighting of adequate intensity.

Doors and gates

Sliding doors must be fitted with a safety device to prevent them from being derailed and fall over. Doors and gates along escape routes must be appropriately marked. In the immediate vicinity of gates intended primarily for vehicle traffic doors for pedestrian traffic must be ensured. They must be signalled by signs in a clearly visible and must be kept free at all times. Mechanical doors and gates must function without risk of accident to workers. They must be fitted with devices for emergency stop, easily identifiable and accessible with the exception of those which open automatically in the event of failure of energy, and must be able to be opened by hand.

Traffic routes - dangerous areas

Traffic routes, including stairs, fixed ladders and loading bays and ramps, must be calculated, placed and arranged and be accessible so that they can be used easily, in complete safety and in accordance with their intended purpose and the workers employed in the vicinity of these traffic routes are not exposed to any risk.
Routes used for pedestrian traffic and/or for goods and those where loading or unloading operations are executed must be dimensioned according to the number of potential users and the type of the activity.
If means of transport are used on traffic routes, a sufficient safety clearance or means of adequate protection must be provided for other site users.
The traffic routes must be clearly marked, regularly checked and maintained.
Traffic routes must be placed in such a way that there is a sufficient distance from the traffic routes and doors, gates, passages for pedestrians, corridors and staircases.
If the site includes areas of limited access, these areas must be equipped with devices to prevent the entrance of the workers without the powers of the service in the areas concerned.
Appropriate measures must be taken to protect workers authorized to enter dangerous areas.
Dangerous areas must be clearly signposted.

Loading bays and ramps

Loading bays and ramps must be suitable for the dimensions of the loads to be transported.
Loading bays must have at least one exit point.
Loading ramps must be safe, so that workers do not fall.
Space for freedom of movement at the workstation.
The surface of work stations should be established, depending on the equipment and the necessary material, so as to allow workers sufficient freedom of movement for their activities.

First aid

The employer must ensure that first aid can be done at any time. Also, the employer must ensure that the staff is trained for this purpose. Measures must be taken to ensure the evacuation, for medical treatment, of workers who have had an accident or have suddenly been ill. Provision should be made for one or more first aid rooms, in the light of the scale of the works or the types of activities.

Rooms for first aid must be equipped with facilities and with materials essential for first aid and be easily accessible to stretchers. These spaces must be indicated by signs in accordance with the provisions of the

national law transposing Directive 92/58/EEC. First-aid equipment must be secured in all places where working conditions require it. It must be indicated by signs properly and must be readily accessible.
A panel of signals located in visible areas will clearly indicate the address and telephone number of the emergency service.

Sanitary facilities

Changing rooms and lockers for workers must be made available for them if they have to wear work clothes and where, for reasons of health or propriety, they cannot be expected to change in another room. Changing rooms must be easily accessible, be of sufficient capacity and be provided with seating. Changing rooms must be sufficiently large and have facilities to enable each worker to dry her/his work clothes, where appropriate, as well as her/his own clothing and personal effects and to be able to keep them locked. In certain situations, such as the existence of dangerous substances, humidity, dirt, work clothes must be kept separate from workers' own clothes and personal effects. Every worker must have a place where to put on her/his clothes and personal effects.

Showers and washbasins

When the type of activity carried out or the requirements of cleaning, so require, workers must be provided with suitable showers in sufficient number. Provision must be made for separate shower, separated for men and women, or a separate use of these. The shower rooms must be sufficiently large in such a way as to permit each worker to wash without hindrance in conditions of an appropriate standard of hygiene. The showers must be equipped with running water, hot and cold running water. Where showers are not required, must be provided with a sufficient number of suitable washbasins with running water (hot water if necessary). They must be positioned in the vicinity of the workstations and the changing rooms.

Such washbasins must be separate for men and women or a separate use of them where this is necessary for reasons of decency.

Where the rooms housing the showers or washbasins are separate from the changing rooms, these rooms must be connected.

Shower cabins lavatories and washbasins

In the vicinity of workstations, rooms of rest, of changing rooms and the halls of showers, workers must be provided with special repositories, equipped with a sufficient number of lavatories and washbasins, utilities to ensure that the environment is not unnecessarily affected, usually environmentally friendly.

Provision should be made for separate toilet cabins for men and women or used separately.

Rest rooms and/or accommodation areas.

Workers must be provided with easily accessible rest rooms and/or accommodation, when the times of their health so require, in particular because of the type of activity carried out of the large number of workers or the distance from the site.

Rest rooms and/or accommodation areas must be large enough and equipped with an adequate number of tables and seats for the number of workers.

If there are no facilities of this kind, other facilities must be made available to the staff in order for them to be able to use them during the works.

The rooms for accommodation which are not used only in exceptional cases must be equipped with sanitary equipment in sufficient number, with a dining room and with a relaxing room.

They must be equipped with beds, cupboards, tables and seats, taking account of the number of workers. To their allocation account should be taken of the presence of workers of both sexes.

Miscellaneous provisions

The entries and the perimeter of the site must be indicated by signs in such a way as to be clearly visible and identifiable.

Workers must be provided with drinking water on the construction site and possibly another suitable non-alcoholic beverage in sufficient quantities, both in the rooms which they occupy and in the vicinity of the workstations.

Workers must be provided with suitable conditions to take the meals in an appropriate manner and, where appropriate, be provided with facilities enabling them to prepare their meals in appropriate conditions.

6.2. Site OHS instructions

The instructions of labour protection on the site are used in addition to the others, to ensure safe conditions on the construction site.

They are the key elements of safety at work on the construction site (ex: working at heights, electrical, working with fire, digging etc.)

Whereas the technological processes applied within the site implies major risks, the project manager will require builders to present working procedures (for each technological process), procedures approved by the management of the units and endorsed by qualified technical personnel or as appropriate (legal requirements) by external bodies empowered to do so.

The project manager will require the drawing up of programs of work, in which the technical details necessary for the execution of the work in the best possible conditions will be established - the technical, environmental and health at work

For each of the technological process teams of workers with experience, led each by a coordinator of works will be required.

The following rules apply:

- Compliance with the safety at work instructions by everyone.
- The communication of the safety at work instructions before the beginning of the works.
- Updating of the safety instructions at work will be done for objective reasons (ex: accidents), in which case the changes will be communicated before the beginning of the works.
- The annexation of the safety instructions at work specified in the contract or generated by other reasons.

The Instructions for Safety and health at work applied within the framework of the project will be attached by the contractor.

Warning signs (prohibitions, warnings, mandatory signs etc.) which in part are required by law will be displayed on the places required by law under the supervision of the coordinator of safety and/or the person designated for safety and health at work on the construction site. Additional signs will be exposed on a proposal from the staff designated for safety and health at work on the construction site and the coordinator of security in the offices of the site in the dining hall or any other suitable place.

In the case site labour protection instructions/rules are not obeyed by employees the `Rule of the three mistakes` will be applied as defined in **Annex 14**.

Note: Alcohol and drugs are strictly prohibited on the construction site. Any violation of this rule will be followed by the immediate removal of the relevant person from site.

7. The choice of suppliers and subcontractors

Suppliers and subcontractors are elected in accordance with the Quality Management System procedures (procedures, designation, procurement codes). The quality, their ability from the point of view of aspects of safety and health at work and the protection of the environment will be assessed on the basis of standard procedures, after which they should be approved. Account is taken of the questionnaires, audits, references and current performance. In the case of those who execute the construction works on the construction site special attention is given to the aspects of safety and health at work: competence to contribute to the requirements concerning the protection of labour and to the needs of the training, experience, etc.

In the framework of the project accepted subcontractors will comply with the standards of safety and health at work, according to the name and the specific requirements of the project. This fact will be ensured by the relevant conditions of the consortium members and those of the supply contracts.

The name of the first level contractors and subcontractors are listed in **Annex 6.**

8. Communication and Cooperation

8.1. The communication

All the parties must have the appropriate information for the execution of the works in complete safety.

- Subcontractors will have **their own plan for safety and health at work** and the instructions for safety and health at work for the construction site.
- Subcontractors of materials and the carriers will receive the rules of the site which they have the obligation to observe
- In the case of special risks appropriate instructions are ensured.
- Visitors to the site will receive protection equipment, will be accompanied on site, trained and registered under the signature so that their visit may be completely safe (regulation for the access rules in **Annex 16**);
- All partners will cooperate and will communicate in matters of safety and health at work and will comply with the indications given to the OHS coordinator.

8.2. The management of the communication and cooperation

- The organization and the tasks relating to safety and health at work will be in accordance with **section 2**, with the compulsoriness character for all suppliers and subcontractors;
- The information relating to the safety and health at work and to the training requirements described **in section 13** must be fulfilled by subcontractors.
- In case of deficiencies at the level of safety and health at work the contractor has the right to require additional training or termination of the activity. In the most serious cases he/she has the right to exclude the on-site employees, suppliers or subcontractors.
- The start-up meeting will be organized in order to have assurance that all subcontractors have complete information, understand the work, the implications for/towards other participants, the restrictions, declarations of methods and coordination of safety and health at work.
- All subcontractors to the site will be forced to participate in the meetings concerning the safety and health at work in accordance with **Section 14**.

9. Measures for the security of the site

The security of the site will be ensured by an adequate system of control of access.

The unauthorized persons do not have access on the site. Moreover, it is necessary to comply with the traffic rules, the fitting of the specific indicators for the prohibition of unauthorized access, the speed limitation, including access and the exit of the transport vehicles and the rules regarding the parking.

The rules on the control of the access system on the construction site and those on the traffic are shown in **Annex 16** and in the Regulation of the site.

10. Procedures for situations of imminent danger

The staff of the site will have at its disposal procedures which specify what measures should be taken in the event of an imminent danger or potential danger. These procedures include information about the procedures to be exercised in the event of an emergency (e.g: who should be informed, information relating to the nearest hospital doctor or other medical services, arrangements on first aid, the alarm system for fires, equipment for protection against fire, emergency exits, assembly points etc.)

This information can be found in the plan for emergency situations in **Annex 11**.

In the event of a dangerous situation, which requires the discharge of the site the evacuation plan will be applied in accordance with **Annex 12**.

11. Reporting accidents/incidents

The entire staff of the site has the obligation to inform superiors with regard to any accident or incident. The superior will inform the supervisor in the field of health and safety which in turn will inform the project manager.

The project manager has a responsibility to ensure that all accidents/incidents are reported and that measures are taken to prevent them.

- Death, serious injury, dangerous situations will be immediately communicated to the authorities and to the territorial authorities concerned, by the most rapid way, and subsequently confirmed in writing.
- The information concerning the competent authorities and their addresses will be laid down by the general manager of the construction site and by a beneficiary before the occupation of the site and form part of the OHS Plan. All addresses and telephone numbers required, will be displayed in the office of the site and on the posters relating to safety and health at work, see **Annex 17**.
- The general manager of the site will report all accidents to the **Territorial Employment Inspectorate** and to the general observatory of the centre of the contracting authority, in accordance with the procedure of internal reporting.
- If informing the media is required, this will be coordinated by the spokesman of the Project Manager's. The procedure for reporting is defined in **Annex 13.**

12. Social Insurance and facilities on the site

Canteens, toilets, spaces for washing, drinking water etc. are ensured for all employees and subcontractors. A space for first aid kit will be ensured which will be properly equipped with pribox, transport stretcher and a bed. The details are set out in the **Annex 12**. This Annex shows the plan of the site on which all the facilities are marked and includes useful information which have not been referred to in the Regulation of the site.

13. The information and training of the staff of the construction site

All persons on the site will receive information relating to the safety and health at work, instructions and training, before they are allowed to enter on the construction site:

- General training;
- Occupational Safety and health Plan;
- Regulation on the construction site and internal Instructions for Safety and health at work;
- Instructions relating to safety and health at work at the place of work on the construction site.

The coordinator of the safety and health at work will check that the following are observed:

- The employees of the contractors sent on the site have been trained on a regular basis with regard to the OHS;
- Subcontractors must prove that their employees are trained with regard to the safety and health at work, by checking at the entry on the site of the sheets of their health and safety, that they are fit for the task of work (confirmation of the occupational medicine physician in the sheet) and that they satisfy at least the requirements mentioned above. (the documentation is made available to them);
- Training for first aid of subcontractors: each subcontractor will comply with the legal requirements in relation to the training for first aid.
- The training for first aid on the construction site: the general manager of the construction site regularly verifies the delegates at the monthly statement of safety and health at work if the number of people qualified in first aid is sufficient. If necessary, he has the right to request additional training.
- If changes/amendments to the Occupational Safety and Health Plan are made, as a result of changes to the conditions which have an impact on OHS, training will be performed and changes are treated in accordance with the requirements of OHS coordination as initial information.
- The awareness of the protective measures: apart from the training with regard to the awareness of OHS, on the construction site OHS posters will be placed, notes regarding the warning about the fire and the imminent danger etc. The aspects relating to safety and health at work specific to the site will be regularly discussed by the project manager and the supervisors. A program for granting awards will be establish to stimulate those who give evidence of a high degree of awareness and for the penalty of those who do not comply with the instructions of this updated plan and annexes.
- Warning notes provided by law will be located according to the needs.
- The instructions relating to the aspects of the environment that may partly coincided with those for safety and health at work, can be found in the Environment Plan.

14. The coordination / monitoring of safety and health at work

The coordination of safety and health at work are important components of the system of management of the OHS. Through this the compliance with all the requirements of the Occupational health and safety is ensured and the correct operation of the system in the event of changes.

14.1. Coordination Meetings

The coordination meetings are meant to review the progress of the works and to warn on all the participants in the works on the occurrence of situations that may affect the works in execution, eg: deliveries, cranes, issue and/or withdrawal of work permits, implications for/others, restrictions or the measures to be taken as a result of the inspections//incidents/accidents. These meetings always include themes such as `Safety and Health at Work` and `Environment`.

Participants (at least): The Project Manager, supervisors, the representatives of the subcontractors, as needed.

14.2. Short Meetings for Safety and Health at Work

The safety and health at work meetings will be held on a weekly basis to provide information about the special topics, instructions for special situations, repeated trainings and especially for the intensive communication with regard to the matters of labour protection in daily work.
Suggestions/subjects for discussion from the working staff are welcome.
The track of the results will be kept.
Participants (at least): the project manager, consultant on matters of OHS, coordinator for safety and health matters, representatives on matters of OHS of the partner/subcontractors involved in the Executing phase, other people according to the needs.

14.3. Monthly meetings for Safety and health at work

In addition to the regular coordination meetings with the representatives of the beneficiary, monthly meetings on safety and health at work will be held, in which the presence is mandatory.
The objective of these meetings is to revise the OHS Plan and to assess the performance of the safety and health at work.
Participants (at least): the general manager of the construction site the management of the safety and health at work on the construction site, a representative of each contractor, a representative of the contracting authority.
The track of the results will be kept.

14.4. The work permit

For any frequent work with a minor potential of risk (as set out by the risk assessment) a work permit will be issued. This permit may be released also for limited access or limited work (see **Annex 15**).
For the issue and withdrawal of the work permit an authorized person will be appointed with a corresponding qualification in the activity in question.

14.5. The inspections

The project manager and all supervisors are required to verify that the requirements relating to the SSM and the environment are fulfilled.

The management of the health and safety at work of the contractor or other competent personnel will verify at irregular intervals and on special occasions the site. As a general rule these checks will be carried out on a monthly basis. The results of the inspections on the site will be reported the preventive measures will be defined.

In addition, external inspections of the site will be carried out. The results of these inspections will be recorded in writing and taken into account in the OHS assessment.

14.6. Audits for safety and health at work

The contractor will carry out the official audits relating to safety and health at work. Usually an audit is performed per site for the assessment of the level of performance of the system of management of safety and health at work.

14.7. Record of safety and health at work on the construction site

The supervisor in the field of safety and health at work will keep a record of the OHS measures on the site which are entered in the **Register of coordination** as necessary. The reports of accidents, incidents and of deficiencies and OHS statistics will be handed to the coordinator in the field of safety and health at work of the site. A copy of the OHS file will be submitted to the manager of the contractor. For the content of the **Register of coordination Annex 19** will be consulted. For the standard forms of report see **Annex 19**.

Head of the Project

Vasile Olteanu

OHS Coordinator during the project preparation

Octavian Cozma

Annex 1 - Administrative information related to the site

1. The name of the site: `Development on the territory of Romania of the National Gas Transmission system on Bulgaria - Romania - Hungary – Austria route` - Lot 4- Pipeline Automation and Securing
2. The exact address of the site: the pipeline is located on the territory of the Giurgiu,Teleorman, Dâmbovița, Argeș, Olt, Vâlcea, Gorj, Hunedoara, Caraș – Severin and Timiș counties. Special attention will be given to the works to be executed at the Jupa, Bibesti and Podisor GMSs. On this lot the pipeline is considered to be located between Podișor and Recaș.
3. The name of the Beneficiary: SNTGN Transgaz SA Medias;
4. Type of works: Construction - Mounting execution of electrical and automation installations;
5. The Project Manager: Vasile Oltean
6. The OHS coordinator during the project preparation: Octavian Cozma;
7. The coordinator for safety and health matters during the execution of the works:
8. The works start date: 2017
9. Planned duration of the works on the construction site: 882 days;
10. The estimated maximum number of workers on the construction site: 100;
11. The number of independent subcontractors/constructors on the construction site: 16

Annex 2 - Transgaz Policy Statement on Ocupational Health and Safety

POLICY STATEMENT ON THE INTEGRATED QUALITY-ENVIRONMENT, OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM

Transgaz's policy is to ensure permanently a safe and healthy working environment in all locations, for all employees including for contractors and visitors as well.

As of 2013 Transgaz initiated the integration of the Environment-Quality Management System in line with SR EN ISO 9001:2008, respectively SR EN ISO 14001:2005 with the Occupational Health and Safety Management System, in line with SR OHSAS 18001:2008.

The principles underlying the Integrated Quality-Environment, Occupational Health and Safety Management System are:

- the approach of the management as a system;

- the approach in terms of the processes related to the activities;

- the satisfaction of the requirements of the clients and of the stakeholders;

- sustainable development of the processes;

- Risk management related to the safe operation of the installations and minimizing the impact on the human factor and upon the environment;

- the involvement of the employees;

For all of the above the following objectives are set:

- The Implementation of the Integrated Quality-Environment, Occupational Health and Safety Management System in the entire company;
- Compliance with the legal and regulatory requirements;
- Analysis and identification of the departmental processes;
- Design of a performance management system;
- Elaboration of a business continuity plan;
- Monitoring performances and continuous improvement;

According to the tasks assigned to me I undertake full responsibility for the setting and allocation of the necessary resources in view of the continuous maintenance and improvement of the Integrated Quality-Environment, Occupational Health and Safety Management System in line with the declared policy.

Petru Ion VADUVA
Director General

Date: 13.06.2013

Annex 3 - The organization of the execution of the works under the project

1. General description of the site

1.1 Introduction

The beneficiary will hand over to the constructor the location of the construction site free of any tasks and will fulfil all its obligations.

1.2 The objectives of the project

In the OHS Plan the risks presented by these works are also included. In case there are dangers for the employees that are not included in the OHS Plan or measures to combat the hazards are included which may not be implemented by the companies concerned, the coordinator of the site must be notified without delay on this, even before the commencement of the works.

The records of the conferences and of the inspections of the site drawn up by the coordinator of the construction site and forwarded to the persons concerned constitute adaptations to the OHS Plan.

The measures and the provisions laid down in the appropriate decisions (construction permits issued under the legal rules, health approvals etc.) must be respected and will not be explicitly referred to in this OHS Plan.

The proposed configuration

The works are carried out on the territory of the Giurgiu, Teleorman, Dâmbovița, Argeș, Olt, Vâlcea, Gorj, Caraș – Severin and Timiș counties. On this lot the pipeline is considered to be located between Podisor and Recas.

Necessity and opportunity

At present the NTS entry and exit points Giurgiu and Nadlac are connected through a pipeline system as follows:

- The Ø 20" Giurgiu – Podisor pipeline;
- The Ø 20" Podisor – Corbu pipeline Section 1 and Section 2;
- The Ø 20" Corbu - Hurezani pipeline Section 1, Section 2 and Section 3;
- The Ø 20" Hurezani - Bibesti - Sambotin - Hateg pipeline;
- The Ø 20" Bacia - Hateg - Recas pipeline West 1 and West 2;
- The Ø 24" West 1 and Ø 20" West Recas 2 – Masloc pipeline;
- The Ø 24" West 1 and Ø 16" West Masloc 2 - Fantanele pipeline;
- The Ø 24" Fantanele - Horia pipeline and the Ø 20" Fantanele - Vladimirescu - Horia pipeline;
- The Ø 28" pipeline of the Horia - Nadlac Gas Metering Station (GMS);

The maximum allowable operating pressure of the above mentioned pipelines is 40 bar. At present the operating pressures do not exceed 30 bar and the diameters are not bigger than Ø 24". The available transmission capacity do not allow the transmission of volumes of gases established in the agreements concluded with Bulgaria and Hungary.

`Development on the teritorry of Romania of the NTS on the corridor Bulgaria-Romania-Hungary-Austria` consists in the construction of a new gas transmission pipeline to make the connection between the GCS Podisor and the GMS Horia.

This investment is part of the Projects of Common Interest (PCI) of the European Union Corridor PCI 7.1.5 – the Romanian sector.

By the construction of this pipeline the following objectives will be attained:

- The diversification of the sources of gas supply of European countries;
- The transmission toward the Central European markets of the gas reserves from the Caspian region;
- Ensure in the direction of Bulgaria transmission capacities in both flow directions of 1.5 billion m3/year natural gas, until the end of March 2019;
- The development of transmission capacities in the direction Hungary until the end of March 2019 of up to 4.4 billion m^3/year.

This transmission pipeline will allowthe interconnection with the pipelines having as potential sources Black sea gas, Black Sea liquefied gas (the AGRi project);

In these conditions the development on the territory of Romania of a gas transmission infrastructure from the Black Sea shore up to the Hungarian-Romanian border is one of the major priorities of Transgaz. In this respect the project `Development on the teritorry of Romania of the NTS on the corridor Bulgaria-Romania-Hungary-Austria` was included in the Transgaz TYNDP.

The entity responsible for the implementation of the project is SNTGN Transgaz SA Medias, the authorized operator of the Romanian Gas Transmission System.

On this lot pipeline automation and securing works will be executed enabling acquisition of relevant data at CCCAMS Jupa, Bibesti and Podisor.

The limits of supply

Design data

The design of the works on the `Development on Romanian territory of the National Gas Transmission System on the Bulgaria - Romania - Hungary - Austria route Lot 4 Pipeline Automation and Securing` is carried out in accordance with the provisions of the project regulatory documents and standards.

The necessary requirements and works were established in each Tender Book.

The first tender book CS1 refers to the general conditions for choosing the equipment which is part of the project. This equipment will be chosen in accordance with the general requirements.
This tender book also contains project preparation requirements in the execution details phase DDE. Each of the main systems described in this technical project will have a draft execution detail endorsed by the Beneficiary. The draft execution detail will consider the equipment chosen.
According to these general requirements all described systems must operate in an integrated way so that there is no problem regarding their interconnection.
At the Pipeline Automation, Surveillance Control Centres (CCAMS) at Jupa, Bibesti and Podisor equipment ensuring redundancy for any unforeseen situation will be mounted.

The second tender book CS2 refers to power supply and distribution installations mounted at the valve stations.

The valve stations will be mounted along the pipeline route and are mainly pressure discharge valve stations (large valve stations), pressure monitoring valve stations (small valve stations, valve stations which are mounted at railway crossing downstream of a pressure discharge valve station) and technological node interconnection valve stations. At the technological nodes interconnection valve stations control valves will be mounted and they will operate with flow and pressure adjustment.

Pressure discharger valve stations will have insulated enclosures. The enclosures will have the following dimensions (Lxlxh): 6x2.4x2.8m.

Also at the Podisoru, Recas, Hurezani locations whwer there is an interconnection with the NTS the same type of enclosure will be mounted, but the switch boards will be of the TGA 1 type.

The following switchboards will be mounted inside these enclosures:

- TGA - general switchboard and automation of board supplying electricity and for the valve station automations;
- TGA1 - mounted at the interconnections near the Podisor, Recaş, Hurezani technological nodes;
- TC - switchboard for communications, data transmission. At the interconnection stations the meter/meters will be installed within the communications switchboards;
- TFS - switchboards for sensitive optical fiber. These switchboards will be mounted in 7 enclosures along the pipeline route and 3 additional switchboards in the automation rooms (CCAMS);
- TEC – enclosure switchboard for the electrical installations within the enclosure (single-phase and three-phase sockets, interior lighting, air conditioning, fire detection panel, automatic fire extinguishing system);

The TGA switchboard will supply also the TE1 switchboard mounted in the pressure control valve stations minishelter. These valve stations are mounted at railway crossing. TE1 switchboards supplying electricity and for the local valve automation are installed at the valve stations in cabinets called minishelters. At the interconnection valve stations near the Corbu Technological Node electrical panels for power supply and local valve automation. TE2 switchboards supplying electricity and for the local automation of the control valve, with flow and pressure control valves and related valves will be installed in cabinets called minishelters.

Tender Book CS3 presents the interior power installations in the valve stations and the protection of the installation at accidental touche and atmospheric discharges.

Within the pressure discharge valve stations power and data electrical installations, executed according to the applicable standards, will be mounted, with a total installed power Pi = 8.00 kW stations, and for pressure measurement valve stations, it is envisaged a total installed power Pi = 4.00 kW.

The power supply will be made for each valve group, from BMPT through a new three-phase power line. Power supply for each individual location is presented in the tender books for electricity power supply presented in Lot 1, Lot 2, Lot 3 projects.

Backup power supply of the equipment that will be installed at the objective is achieved by installing an automated gas generator equipped with AAR.

The following will be described in this tender book:

- lighting inside the valve stations;
- execution of TGA, TGA1, TE1, TE2 switchboards installed at the valve stations;
- electrical connections between TGA, TGA1, TE1, TE2 and station equipment (generator, valves, pressure and temperature transducers);
- electrical connections between the switchboards;
- equipment supply grounding;
- providing UPS redundant power;
- execution ground plates inside the valve stations;
- Ex zoning of valve stations.

CS 4 describes the automation system according to which the automation installations will be executed under a `turnkey work` system, including the diagnosis and maintenance system, the video wall system and the gas metering system at the interconnections with the technological nodes. The servers for these systems will be installed in the pipeline automation, monitoring and surveillance control centres (CCAMS) at Jupa, Bibesti and Podisor.

These centres will have two rooms in each of the three locations:

- automation room with equipment, servers, racks;
- pipeline route dispatching room;

Each center will be equipped properly enabling implementation of an integrated control, automation, monitoring and supervision achieving control of the valve station, cathodic protection systems, security system, sensitive optical fibre system, control of gas through the control valves at the technological node interconnection tations at Podisor, Bibesti, Corbu and Recas, ensuring transmission of information flow to and from the SCADA system implemented at Transgaz.

All works necessary for the execution both at the level of the centres and at the valve stations.

CS 5 describes the implementation of a data acquisition system for the cathodic protection system, data processing and commands in this system. Data acquisition refers to those data to be received from rectifiers mounted at the valve stations and potential taps with data transmission mounted along the pipeline route. For monitoring cathodic protection and special potential taps mounted midway between two rectifiers along the route, a server (redundant system) will be installed at the Jupa Compressor Station. It will also be implemented a software for cathodic protection management.

The tender book refers to the cathodic protection data acquisition system specifying functional requirements and technical conditions necessary to the achievement in the `turnkey work` regime.

In phase 1 a total number of 18 cathodic protection stations will be executed. 17 potential taps with data transmission will be mounted. The rectifiers will be located at the pressure discharge valve stations (in one case a cathodic protection station will be installed at the Bibeşti compressor station). The data acquired from these rectifiers will be available at an interface and from there sent to a local PLC. Subsequently through the data transmission system, of the TC board data will be sent to a server (redundant) mounted at the Jupa Compressor Station automation room (CCAMS). The accessories will be integrated into the functional assembly of the BRUA objective and will be in accordance with the description, specifications and requirements of this tender book and the technical data sheets of this system, noting that they are not limitative.

Tender Book CS 6 refers to an integrated security, access fire mangement system along the pipeline route.

Detection, signaling, fire alarm systems and detection, signaling, and unauthorized access alarm systems will be mounted in each valve station.

At the valve stations where enclosures (6x2.4 x2.8 m) are mounted, Inergen gas automatic fire extinguishing systems be installed.

The valve stations having a switchboard in the minishelter will only have a fire detection system and a fire alarm system.

Each valve station will have an authorized access security system. This system has in turn a subsystem for signaling and authorized access alarm and video surveillance subsystem.

Access in the valve stations will be controlled by typing the valid access code on the keyboard installed at the gateway.

Access in the valve stations will be monitored by video system and recorded by a local NVR. Autonomy registration will be of minimum 30 days from recording with HD with IP cameras throughout the entire period of the day.

Data provided by the fire alarm system will be transmitted to the Jupa CCAMS.

CS 7 refers to the sensitive optical fibre system detecting and accurately locating unauthorized excavations and gas loss along the pipeline route. This detection and localization will be performed in real time based on dedicated switchboards mounting in certain valve stations and in the three compressor stations Podisor, Bibeşti and Jupa.

The project will be implemented along the entire BRUA pipeline and facilities.
The constructor will install the softwares and the software applications.
The BRUA pipeline facilities to be equipped with switchboards for sensitive optical fibre are:

- Pressure discharge valve stations foreseen in the construction diagram;
- Podisor Compresssor Station;
- Binesti Compressor Station;
- Jupa Compressor Station where the application server and the software applications developed and integrating the entire system will be mounted.

The mounting of the system will ensure:

- monitoring mechanized or manual excavations over an area including the pipeline length and a width of 20 m (10 m left and right of the pipeline axis);
- monitoring gas losses along the pipeline route;
- route map indicating the precise location where an event occurs;
- clear graphic presentation of intrusion (excavations, manual excavation, loss of gas, etc);
- detection of optical fibre breaking;
- reporting alarms by levels;
- system failure self-diagnosis function;
- data interfaces;
- I/O modules to connect with other systems;

CS 8 refers to the industrial telecommunication system. The BRUA industrial telecommunication system has the role of ensuring industrial data transmission and extending the unified communications solution in operation in Transgaz at all points of interest along the BRUA pipeline route. In this regard an optical fibre cable will be installed along the pipeline route and will be used to ensure connection between active communication equipment installed in locations with pressure discharge valves (24 pcs.) and compressor stations (3). Optical fibre cable will be interrupted at each point of interest mentioned above and will be connected to an optical fibre patch panel.

Active equipment enabling expansion of the unified communications solution will be installed at each point of interest. Two active communication equipment supplies are identified:

- active equipment for the compressor stations locations;
- active equipment for the valve station locations.

The telecommunication system is particularly important because it is considered to be the `nervous system` making the connection for the implementation of an integrated automation, monitoring, supervision and control enabling valve station, cathodic protection systems, security system, sensitive optical fibre, etc control.

The communication system ensures data transmission for the following systems:

- The automation system;
- Cathodic protection data acquisition system;
- Intrusion and fire integrated security management system;
  - The CCTV system (surveillance cameras);
  - Intrusion and access control system;
  - Fire monitoring system;
- Sensitive optical fiber system;
- Technological node interconnection gas metering system;
- The telecommunications system.

Utilities: electricity

The electrical power supplies will be executed for the valve stations and the interconnection unit in another project. The electrical power supplies will run of the 0,4 kV power lines and from the 20 kV power lines.

Storage of flammable materials

At the site there is no fuel deposit. It is absolutely forbidden for the contractor and subcontractors to store any fuels on site. Petrol and the necessary oils for the electrical generators or other equipment are brought on site only in the quantity necessary for the current day of work and will be deposited only in the original containers. Temporary deposits of inflammable materials, such as: paints, thinners, wrapping paper, plastic materials flammable, timber etc. will be initiated only in strict compliance with the OHS and firefighting legislation and in accordance with the plan. About the position of these deposits, the mode of the protection and prevention of events the safety coordinator will be informed directly.

The fire-fighting system

Mobile extinguishers must be insured calibrated qualitatively for combustible material and appropriate size/quantity. At each enclosure the project foresees fire estinguishing systems.
The firefighting legislation applicable to the works:

- Law 307/2006
- OMAI 163/2007
- IMO 712/2005
- P 118-99 Regulation for fire safety of constructions
- MP 008-2000 Manual on the illustrations, details and solutions for the application of the provisions of the Traffic Licensing P 118-99
- C 300-94 Regulation for the fire prevention and fire-fighting solutions on the duration of the execution of the construction and installations work relating thereto
- What 1-95 Regulation regarding the design of the civil buildings from the point of view of the requirement for safe operation
- Ord. 163/2007 General Rules of defence against fire
- NP086-05 normative document for the design, implementation and operation of the plants of fire-fighting equipment

- Throughout the course of the execution of the works and in the activity of the operation and maintenance of the designed installations the strict observance of the provisions of regulatory acts referred to is compulsory.

Drinking water

Drinking water in the Execution phase will be supplied daily from outside the site in bottled bottles.

The environmental conditions

The noise level

The noise in the interior during the execution phase: the lower limit value of the exposure to noise according to GD 493/2006 is 80 dB(A). From this level actions to eliminate the risk must be taken.

In the execution phase the exceeding of the allowable level of noise is due to the sum of the noise produced by the operation of the machinery.

The assessment of the level of noise in the Executing phase may be carried out at a time of maximum activity at the site.

The exhaust emissions

In the execution phase the emissions of possible nuisance resulting from the activities will be carried out in a natural way. Depending on the nature of the works sufficient care will be taken to ensure open space or exhaust devices for the elimination of the potential nuisances.

The residual liquids

In the execution phase no waste liquids are generated.

Specific conditions of the site

The geographical characteristics of the site of the objective of investment are presented in the technical project in point 2, a general description of the works.

2. The execution of the works

No.	The name of the unit	Activity/ work	Person Responsible for the Works	Phone Number
1.	S.C. ..... S.A.	According to project tender books		
2.	**S.N.T.G.N. TRANSGAZ S.A. - Medias**	1.Power equipment general technical conditions; 2. Power supply and distribution installations; 3. Valve station inner power installations and atmospheric discharge protection; 4. The automation system; 5. Cathodic protection data acquisition system; 6. Intrusion and fire integrated security management system; - The CCTV system (surveillance cameras); - Intrusion and access control system; - Fire monitoring system; 7. Sensitive optical fiber system; 8. The telecommunications system;		

Annex 4 - Analysis of the risks generating emergency situations and measures of defence and fire prevention

Chapter 1. The specific legislation

1.1. Emergency situations

•Decision no. 1491 of 9 September 2004 approving the Regulation - Framework on organizational structure, responsibilities, functioning and endowment of committees and operational centres for emergency situations;
• Decision no. 1492 of 9 September 2004 on the organization, functioning and powers of the professional emergency services;
• Emergency Ordinance no. 21 of 15 April 2004 on the National Management System for Emergency Situations;
• Order no. 712 of 23 June 2005 approving general provisions on training employees in emergency situations;
• Order no. 360 of 14 September 2004 approving the performance criteria for the organizational structure of professional services and equipment for emergency situations;
• Order no. 1134 of 13 January 2006 approving the Regulation on planning, preparation, organization, development and management of intervention actions of the professional emergency services;
• Order no. 1160/2006 for approving the Regulation on the prevention and management of emergency Situations, risk of earthquakes and/or landslides;
• Order no. 132 of 29 January 2007 approving the Methodology on the preparation of the plan of analysis and hedging;
• Order no. 160 of 23 February 2007 approving the Regulation of planning, organizing, conducting and completing activities to prevent emergencies services provided by voluntary and private emergency.

1.2. Fire prevention and extinction

- Law 307/2006 on protection against fire;
- Decision 571/2016 for the approval of the categories of construction and design which are subject to approval and/or authorization relating to safety at fire;
- M.A.I. Order No 163/2007 for the approval of the general firefighting rules;
- Order No. 210/2007 for the approval of the methodology for the identification, evaluation and control of the risks of fire;
- Order no. 106 of 9 January 2007 approving the criteria for establishing local councils and businesses who are required to hire at least a technical or specialized staff with responsibility for fire protection;
- Normative document on the constructions fire safety, Part II - Installation of extinction, indicative - P 118 /2- 2013.

Chapter 2. Analysis of risks generating emergency situations

and measures taken at designing for the objective

PT- 1062 –Development on the teritorry of Romania of the NTS on the corridor

Bulgaria-Romania-Hungary-Austria – pipeline automation and securing

1. The specific legislation

1.1. Emergency situations

•Decision no. 1491 of 9 September 2004 approving the Regulation - Framework on organizational structure, responsibilities, functioning and endowment of committees and operational centres for emergency situations;
• Decision no. 1492 of 9 September 2004 on the organization, functioning and powers of the professional emergency services;
• Emergency Ordinance no. 21 of 15 April 2004 on the National Management System for Emergency Situations;
• Order no. 712 of 23 June 2005 approving general provisions on training employees in emergency situations;
• Order no. 360 of 14 September 2004 approving the performance criteria for the organizational structure of professional services and equipment for emergency situations;
• Order no. 1134 of 13 January 2006 approving the Regulation on planning, preparation, organization, development and management of intervention actions of the professional emergency services;
• Order no. 1160/2006 for approving the Regulation on the prevention and management of emergency Situations, risk of earthquakes and/or landslides;
• Order no. 132 of 29 January 2007 approving the Methodology on the preparation of the plan of analysis and hedging;
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- M.A.I. Order No 163/2007 for the approval of the general firefighting rules;
- Order No. 210/2007 for the approval of the methodology for the identification, evaluation and control of the risks of fire;
- Order no. 106 of 9 January 2007 approving the criteria for establishing local councils and businesses who are required to hire at least a technical or specialized staff with responsibility for fire protection;
- Normative document on the constructions fire safety, Part II - Installation of extinction, indicative - P 118 /2- 2013.
- Order 166/2010 on the approval of the general provisions on fire protection on buildings and related installations.

2. Analysis of risks generating emergency situation and protection measures taken at designing

The personnel who provides the supervision, operation and maintenance of gas transmission pipelines and the related installations will be trained by the employer in accordance with the legal provisions and Order no. 712/2005 in the field of emergency situations.

The analysis of the risks generated from emergency situations, presented below and the measures to cover them taken from the design stage have been made in accordance with the provisions of the MAI Order no. 132/2007, as follows:

2.1. The analysis of natural risks

2.1.1 The hazardous weather phenomena

Flood

When designing the pipeline automation and security systems all safety measures were taken and it was taken into account the hydrological study, the possibilities to exceed the maximum flow in existing regime of rivers crossed by the pipeline. The facilities where the pipeline automation and security systems will be installed are located away from rivers, streams, canals. There is a minimal risk of flooding and this can occur only in extreme cases, with a low probability of occurrence if torrents appear on slopes. For the latter case insulated enclosures, rectifiers and minishleters were foreseen for the equipment. They are located on raised foundations or electric poles. When placing on the poles the rectifiers at least 1.5 m above the ground will be considered. The data transmission potential taps have switchboards mounted at least 1.5 m above the ground.

Storms, tornado, drought, frost

Technical installations are designed to be fitted in the above ground and underground solution.

By the project and subsequently air conditioning is ensurd in the insulating enclosures, rectifiers, minishelters or other switchboards. The equipment has a protection degree protecting them from these phenomena. The superstructure of technological installations has been designed - taking into account the prevailing direction of the action and the force of the impact of the wind, in the history of the area of the site storms and tornadoes are not recorded.

For underground electrical installations electrical cables are laid under the maximum depth of soil frost established for the location zones. Also for the sensitive optical fibre cabind are mounted below freezing limit, its connections being protected in connection boxes.

Forest fires

This is not the case, the probability is minimum. In the vicinity of forests, during fire works workers will be trained to protect vegetation against fire especially in dry weather and not to meke fire in the forest.

2.1.2. The destructive phenomena of geological origin

Earthquakes

The design works were executed by the seismic framing in accordance with the provisions of the Regulation P100.

Land slides

At the location of the gas transmission pipeline and the designed pipeline electrical, automation and securing installations safety measures were taken so that no land slide affects the equipment operation. The enclosures, minishelters, swithcboards and other equipment are mounted in secure foundations.

2.2. The analysis of the technological risks

Industrial Risks

At the execution of the designed installations no hazardous substances are used.

The risk of storage and transport of dangerous products

By the designed installation it is transmitted natural gas, which may become a source of explosion or fire only mixed with air in a certain proportion. Upon the commissioning of the plant the necessary measures will be taken for the evacuation of air. Measures are taken to prevent fires and explosions by prohibiting the access with sources of fire. Connection of electrical cables to the pipeline or other connection in location presenting an explosion danger will be carefully monitored.The welding of the fittings and pipes will be executed with all appropriate safety measures including the existence of permits with fire approved by the management of SNTGN Transgaz SA Medias and only by staff specially trained and equipped for the carrying out of such types of work

Nuclear risks

Measures will be taken for the pipeline personnel be directed to the nearest decontamination and civil shelter centre.

The risk of pollution

The measures to be taken according to the design exclude any risk of pollution of the waters and in general the environment, in the process of gas transmission, electrical connection and equipment mounting, even in the event of damage. Also, the execution works of the installations of any type, related to the project, does not affect in any way and do not hinder the flow of water in the area of the site. In order to prevent entrance of petroleum substances which may contaminate groundwater, special measures must be taken for the replacement of the fuels and lubricators at motor vehicles and equipment. Since every technical work has an influence on the environment, including here also the ground electrical cable laying, it is necessary to comprise in this chapter the following:

- Applicable environmental protection law;
- Environmental aspects identified for such work;
- Measures to be taken for environmental factors protection.

During the execution emissions will be generated from the vehicle transportation of new equipment and materials, which are insignificant compared to those of the current car traffic.

During transportation it is necessary to ensure environmental protection in the event of an accident leading to loss of equipment insulation having polluting substances as an insulation environment.

The manufacturer will demonstrate that it has implemented a suitable environmental management system according to EN ISO 14001. The manufacturer must use at the building of the equipment water, air and soil clean technologies. The manufacturer must use as much as possible only environmentally friendly materials.

During installation the contractor must avoid any activity which is aggressive for the environment, polluting water, air and soil with waste, oil products, noise exceeding the levels allowed.

During and after completion of installation and testing works, the contractor will ensure cleanliness at the workplace, all waste materials and materials removed being stored in special containers.

Within the work phases achieved at the laying of the electrical cables in the ground the following aspects and environmental impact result:

No.	Environmental aspect source	Environmental aspect	Environmental impact	Score	Environmental impact classification
1	Site organisation	Temporary change of land use	Landscape impact	30	Not significant
2	Preparation of work corridor and and trench ecavation for electrial cables	Temporary distruction of soil structure	Decreasing soil fertility	46	Not significant
		Removing vegetation from the area	Temporary destruction of vegetation	46	Not significant
3	Operation and maintenence equipment and vehicles	Sound emmissions in the environment	Noise pollution	46	Not significant
		Toxic emissions in the air	Local air pollution	66	Average
		Accidental oil or fuel leaks on the ground or in the water	Water and soil pollution	79	Average
4	Installing metal/polyethylene pipes for protection of electrical cables in the ground or in the air and the protection of the metal ones by paint coating sol	Volatile organic compounds in the air	Air pollution	62	Average
5	Testing cables for integrity	Possible shortcircuits	Impact on soil fauna	18	Not significant
6	All stages	Waste generation	Soil pollution	30	Not significant
		Natural resources consumption (water, energy, materials)	Decreasing natural resources	18	Not significant

During installation the contractor must avoid any activity which is aggressive for the environment, polluting water, air and soil with waste, noise exceeding the levels allowed, dangerous substances, etc.

During and after completion of installation and testing works, the contractor will ensure cleanliness at the workplace, all waste materials being stored in special containers.

After completing the works, materials dismantled will have the circuit established by Law no. 211/2011.

In order to protect the environment from the potential impacts certain measures were included from the design stage to reduce or eliminate these impacts. These measures consist of:

- choosing the route of the electrical cables so as not to cross the protected areas, areas with high risk of slipping, wetlands, floodplains, forests, orchards and vineyards etc .;
- using as much as possible existing access roads thus avoiding the creation of new roads;
- electrical cables in the ground will be as much as possible located in areas of land not cultivated (crops, orchards, pastures etc.).

During the works the following measures will be observed for the protection of the environment:

- Water protection:
  - Any work in the floodplain of watercourses is prohibited without approval of competent bodies;
  - Any discharge of pollutants or waste into surface waters is prohibited;
  - Car and/or equipment washing in surface waters is prohibited.

- Air protection:
  - To reduce greenhouse gas during the breaks equipment and/or car engines will be stopped;
  - The electric cables laid mainly in silty soils (loess) near settlements, measures will be taken to protect the uncovered soil stored by the trench to prevent dust particles in the air.

- Soil, flora and fauna protection:
  - Regarding the soil, depending on its type, the upper layer will be removed first and stored separately from the rest of the ground to be subsequently removed;
  - Electrical cable coverage will be achieved in the end by restoring vegetation, where removed and stored separately;
  - Domestic waste or other waste will not be thrown, cremated, stored on the ground or buried (polyethylene insulation scraps, polyethylene, copper conductors, loose electrodes (coke, zinc) cloths, paint containers etc.);
  - Waste must be store separately, by category (paper, polyethylene packaging, metals etc.) in containers or containers dedicated to their collection;
  - Waste oils, fuels, carbide slurry on the ground may not be discharged;
  - Only the access roads and parking areas established for the working vehicles will be used.

- Protection against noise and vibration
  - Where power supply is required using 20/0.4 kV transformers likely to generate noise, they will be verified previously by the manufacturers in load. All systems that can produce noise will be firmly fixed;

- Bolts will be tightened with wrenches properly adjusted until its vibrations will be minimal;
- Insurance against loose devices that can vibrate will be executed with washers and nuts, as appropriate;
- Cathodic protection stations transformers will be coated in paint and locked in metal yokes;
- A work program will be chosen for the equipment digging the trench where the cable will be mounted, so the impact on the population in the area be as low as possible.

- Protection against radiation

- Radiation emitted is minimal in case of electrical systems used in the gas industry.

Waste and recovery methods

Waste management recording during execution of works is the responsibility of the contractor executing the works, who must comply with the applicable laws.

No.	Waste type	Code (acc. to GR 856/2002)	Modality of elimination/recovery	Person executing the elimination/recovery operation
1	Copper	17 04 01	Waste generated will be collected in polyethylene bags and recovered at specialized companies. Vr	Operator specialized of the constructor
2	Polyethylene	17 02 03	Waste generated will be collected in polyethylene bags and thrown to the waste dump. HC	Operator specialized of the constructor
3	Metal waste	17 04 07	Waste generated will be collected in polyethylene bags and recovered at specialized companies . Vr	Operator specialized of the constructor
4	Paper	20 01 01	Waste generated will be collected in polyethylene bags and recovered at specialized companies. Vr	Operator specialized of the constructor
5	Ceramics	17 02 02	Waste generated will be collected in polyethylene bags and thrown to the waste dump HC	Operator specialized of the constructor
7	Engine oil	13 02 08	Waste generated will be collected in metal recipients and delivered to specialized units for recovery Ve	Operator specialized of the constructor
8	Concrete parts, debris from demolition		Waste generated will be collected in polyethylene bags/or loaded in specialized trucks and transported to	Operator specialized of the constructor

No.	Waste type	Code (acc. to GR 856/2002)	Modality of elimination/recovery	Person executing the elimination/recovery operation
			waste dumps/disposal sites with the approval of the local municipality HC	

Codes for the `Modality of elimination/recovery`:
DO – town/village waste dump
HP – own waste storage zone
HC – common insustrial waste storage zone
I – cremation for elimination
Vr – recovery through authorized economic agents
P – material or energy use in own enterprise
Ve – energy recovery through authorized economic agents
A – others

The collapse of buildings, installations or existing facilities

On the location of the designed plants not are located buildings.

The failure of the public utilities

Before the beginning of the works, the existing pipelines and cables in the area of the location of the installations for the gas and power will be identified in the presence of the owners and will take all the necessary measures to protect them and thus avoid the damage to their respective interruption of the provision of utilities to the inhabited areas or industrial areas.

Falling objects from the atmosphere or from the outer space

Measures are taken that the personnel along the pipeline route is directed to the nearest civil shelter.

Unexploded ammunition

The areas were searched on the occasion of previous works and no unexploded ammunition was found.

2.3. The biological risk analysis

Measures are taken that the staff on the pipeline route is directed to the nearest centre of decontamination and to the civil shelter .

2.4. The analysis of the risks of fire

Includes references for the analysis and differentiation of the risks of fire after the context: statistical fire and other emergency situations, existing records on localities, economic operators, public institutions, etc, buildings, vegetation or vehicles.

2.5. The analysis of the social risks

In case of a conflict situation, measures will be taken to eliminate them by mediation.

2.6. The analysis of other types of risks

It refers to the statictics-based analysis of the most often performed, such as: extrications, medical assistance and transport, release of persons, building basement water evacuation, animal rescue, etc.

2.7. Areas of increased risk

The designed gas transmission pipeline must be located at safety distances from the buildings, buildings existing in their vicinity, and the inhabited zones, being as much as possible located outside the build-up areas of the towns on the territory of the counties and at the same time outside the industrial areas presenting a high risk. In areas in which such distances cannot be obeyed measures were taken to increase pipeline safety (thickened wall, US verification of the whole surface of the pipeline, strength test of 1.5 P_{regime}, etc). Also, the power installations and equipment in the zones where there is a high explosion risk will be mounted by trained personnel having a permit to work in explosive environment.

The planned preventive activities, organized and carried out with the purpose of hedging the risks are:

- Checks and prevention inspections;
- Endorsement/approval of security to fire and civil protection, as the case may be;
- The agreements and opinions obtained for the commencement of the works and the construction authorisation;
- Specially technical support;
- Prevention Information;
- The preparation of the population;
- Finding and penalising infringements of the legal provisions;
- Other methods.

Intervention plans in emergency situations, drawn up in accordance with Annex 3 to the general rules of defence against fire, **Order 163/2007.**

Emergency response plans include the following:

- The categories of rescue/intervention services in the event of emergency and location of the operative units (locality, distance, the itinerary of travel, phone or other means of alarming, alerting);
- The means of intervention and protection of staff for each type of risk;
- The coverage area of the risks;
- Response times.

Training

The way in which the knowledge has been ensured by the methods intended for intervention, the detailed rules for the action according to the plans for the analysis and coverage of the risks was noted.

3. Measures of defense, fire prevention and fire-fighting

3.1. Protective measures against fire

The performance criteria which must be ensured throughout the execution of the works and during the use (operation) are: the risk of outbreak of fire, resistance to fire, preventing the spread of the fire, the behaviour to fire of the building, the stability to fire the structure of resistance, access routes, exhaust and intervention.

It can be concluded that through the concept of fire prevention the following conclusions may be reached:

- The organization of the activities of defence against fire;
- The management of the risks of fire (identification, evaluation and control);
- Equipping with technical means of intervention in the event of fire, substances for extinguishing and accessories;
- The achievement of the quality requirement of `security to fire` of the constructions;
- Partnership and cooperation with the various factors in the various fields of activity and at different decision making levels;
- Carrying out the actions of public information,
- The dynamics of the elaboration of decisions.

For the objective which is the subject of the project it is necessary to take the following measures for defence against fire, both during execution and operation, and during the execution of maintenance works:

- All electrical connection, the installation of switchboards will be performed only by ANRE authorized personnel;
- The constructor of the electrical installation works must be authorized by ANRE;
- Instalations in explosive environment must be executed only by personnel authorized by INSEMEX;
- The constructormust prepare its own work instructions compliant with the applicable laws;
- The prohibition of the execution of any welding or cutting with open flame near combustible materials;
- The generator of acetylene will be installed in the course of work at a minimum distance of 12 to 15 m from any source of fire: welding arch, open flame, glowing bodies, cigarettes, etc.;
- At the end of work, the generator for acetylene will be dumped and will be washed properly; it is strictly forbidden to leave the generator still in position and loaded with carbide and gas on the inside;
- The manipulation of the oxygen and acetylene tubes will be done with the protective caps and rings of rubber fitted, with great attention and avoiding the tapping and compromising them; at the same time, the tubes of oxygen and acetylene will be stored in places away from solar radiation.
- Smoking is forbidden in the vicinity of the generator for acetylene;
- In case bitumen furnaces are used, they will be located in places away from the movement of equipment and personnel and the transport of the melted bitumen will be done only with approved devices, the workers using the appropriate personal protective equipment: rubber boots, gloves, safety goggles, overalls, etc.;
- Staff working in the radius of the machinery electrically actuated or within the range of electrical network will be trained to avoid electric shock.
- The coupling of the designed pipeline to the pipelines in operation is made only by written order from the Beneficiary and on the basis of a detailed work program with the points of intervention and clear measures, with responsibilities per operators.

For the pipeline coupling – decoupling works and gas installations `by fire` (welding, cutting in metal, working with tools producing sparks) the following measures must be taken:

- The pipeline works will be carried out only with special devices and tools for this kind of operations, only by the trained personnel and on the basis of a schedule drawn up in particular, signed by the competent bodies of the constructor and the recipient and also under the direct supervision of the delegates;
- Any work `with fire` will not be started without ` **THE HOT WORK PERMIT**`, issued by the head of the unit of the beneficiary of the installations to which they are employed; this permit will indicate the preventive measures to be taken in order to begin working with fire;
- The hot work permit (Annex No 4 to the General Rules of Defence Against Fire, approved by Order no. 163/2007) is valid for a single day; for continuing the works a new permit will be issued on each working day; during the working hours, the license must be at the person approved to execute the work;
- The installations and pipelines at which the works are to be executed will be delivered to the constructor by the beneficiary, on the basis of a report which will mention that they are prepared in accordance with the ***minimum requirements for safety and health at work and the rules governing the defence and protection against fire in the relations generated by the contract or the Convention***, - being able to work with them with an open flame and with tools producing sparks;
- It is prohibited to execute welding operations or operations which could produce sparks from plants during the operation of any machines or gas pipelines in operation at related facilities to those in operation;
- The foreman, the head of the team and the workers will not start working before the fulfilment of all the measures referred to in the license for the work with fire;
- The works `with fire` should be stopped immediately if in the course of their execution, independently of taking the necessary measures, `gas leaks` are identified in the vicinity of the place (point) of work;
- Where the conditions provided for by the rules for working with an open flame are not ensured and where it is possible, the portion of the facility or the pipeline at which they are to work will be displaced from the nearest flanges, following previous emptying and are transported in a place where they can work with the fire; after the execution of the operation, the portion of the facility (or the section of the pipeline) is transported and installed again in the installation (or pipeline); both the removal and the mounting will be carried out using the antispark tools;
- It is prohibited to get close with the flame, working with tools that can produce sparks, welding and machinery access at a distance less than 35.00 m of the equipment in operation;
- In all cases where there is a danger of training an explosive mixture the following measures will be taken:
  - The prohibition of smoking and of working with an open flame;
  - Avoidance of sparks;
  - Closing the gas by handling the line valves;
  - The immediate evacuation of the gas from the pipelines and installations by special tools (pressure dischargers, safety valves, etc...);
- Upon the commissioning of the pipelines and new installations, modified or repaired it will be necessary to discharge air from the pipelines and the related installations, leaving to pass at the opposite end to the one that introduces the gases, a quantity of gas representing 2 to 3 times the volume of the pipelines and of the facilities;
- When on the construction site there appear problems the designer will be required to prepare special procedures, so that the execution may to be carried out without the unwanted events.

To prevent the outbreak and expasion of fire during execution the fire fighting provisions of the laws and department rules must be obeyed.

General fire prevention measures at the using of the construction, installations and facilities concern:

- control / supervision in terms of fire prevention activities, during and after their completion;
- determining the technical and organizational measures to reduce the risk of fire or fire consequences;
- maintaining the conditions for safe evacuation of users and security of intervention teams in the event of fire;
- maintenance in operational condition of the technical fire protection equipment.

Operation of systems, installations, devices, equipment is according to the specific technical regulations.

Use of technical means at the above paragraph in case of faults, improvisations or without adequate protection against combustible materials or substances in the area in which they are used is prohibited.

Compliance with operating, verification and maintenance instructions as well as specific measures for fire protection, issued and approved according to law, is mandatory when using the facilities, installations, devices, equipment.

During operation of related construction and technological facilities installations such as those for gas, power, water, heating, ventilating, air conditioning, sanitation and others it is prohibited:

- failure to surveil according to operating instructions;
- operation without the systems, devices and equipment required according to the operating instructions for the control and maintenance of safe operation parameters or their replacement with other oversized;
- improper maintenance of items foreseen for electrical or thermal insulation or for separation;
- exceeding deadlines for carrying out maintenance and repairs or improper performance of them;
- carrying out maintenance and repairs or changes by unauthorized personnel.

Keeping in good condition the atmospheric electrical discharge capture and ground leakage facilities and systems is mandatory for construction and facilities, machinery and technological equipment according to specific technical regulations.

Using static electricity capture and earth leakage systems according to specific instructions and technical regulations is mandatory.

In fire or explosion areas with high risk it is prohibited access of employees and other persons without protective equipment proper to the working conditions.

The use of inadequately protected devices, instruments and tools or whhich can generate sparks in operation, impact or friction in reas or places having the risk of explosion is prohibited.

Products, materials and combustible substances are placed at a safe distance from heat sources or are protected so as not to be possible to catck fire them.

It is prohibited to use stoves and other heating means having defects, with improvisation, supercharged with fuel or unattended, and to make the fire using flammable liquids at pipeline isolation and application of mechanical protection.

During transport, storage and handling of products or combustible substances take into account their physical and chemical properties, so that the contact between them does not produce or does not expand fire.

Combustible products and substances are transported, handled and stored in suitable packaging properly made and labeled to identify fire hazards and establish procedures and suitable extinguishing or neutralization substances.

The layout of hazardous materials in the storage is done according to the storage plan.

When preparing contingency plans compatibility of products or combustible substances with estinguishing substances will be taken into account.

Waste and scrap, discharges and deposits of dust or combustible dusts are removed rhythmically, by using appropriate methods and means, mandatorily at the end of each work shift and will be deposited in special places for storage or destruction.

Waste and combustible liquid or the solid materials such as cloth, hemp, cotton, sawdust, containing such products, are collected in boxes or cans or inner metal lined, provided with cover, located in places without risk of fire, and are marked.

Waste, debris and combustible packaging that are reused, will be stored, ensuring safe distances from buildings, plants, crops, woodland and other combustible materials, depending on the type and physical and chemical properties.

Waste, debris and combustible packaging that are not reused are destroyed in accordance with specific regulations.

Materials and substances which may self-ignite are kept in adequate conditions depending on their type, well ventilated and taking measures to control and prevent the phenomenon of self-heating.

Fuel storage, feed and industrial plants rooms are located at safe distance so that if they catch fire not to endanger neighborhood.

Treatment or protection of combustible materials and construction elements and/or structures of buildings or installations with fireproof or theral protection substances is according to specific technical regulations.

In hot or dry periods, county or local councils in areas with high fire risk and, where appropriate, economic operators managers / heads of institutions in the areas mentioned must develop special plans for specific fire prevention measures.

Special measures during drought include:

- identifying and nominating sectors that increase the risk of fire in typical high air temperatures and lack of rainfall conditions;
- prohibition to use open fire in areas affected by advanced dryness;
- restriction of performance in certain times of the day of works creating favorable conditions for the production of fire by releasing volatile substances or excessive overheating;

- ensuring protection of containers tanks and other types of packages containing flammable or pressurized liquefied gas against the direct effect of sunlight by storage in shady places;
- intensification of checks in areas with agricultural crops and forest vegetation, especially those frequented for leisure;
- daily ensuring and verification of fire water reserves.

The special measures established are made known to all employees and as appropriate to the population.

Fire protection organization requires:

- establishing structures with fire protection responsibility;
- preparation, approval and distribution of authority acts: decisions, regulations, resolutions and others, establishing responsibilities of defense against fire;
- preparation, approval and distribution of fire protection documents and records;
- organization of fire protection at the workplace;
- planning and execution of regular checks in order to target, knowledge and eliminate any imminent danger that may start or expand fire;
- regular analysis of fire protection capacity;
- developing plans to optimize fire protection activity;
- meeting the criteria and requirements for training, approval, authorization, accreditation, certification, approval, provided by the legislation in force;
- achieving for fire notifiation and alert in case of such event;
- ensuring the functioning of the projected parameters of the technical means of fire protection;
- planning intervention of employees, population and the specialized forces in case of fire;
- analysis of fire ocurred, establishing the conclusions, the circumstances, the determinants and measures consistent with reality;
- regulating fire safety reports in the relations generated from contracts/agreements;
- ensuring standardized forms, such as hot work permits, training records.

The personnel performing works has the following main obligations at the workplace:

- Comply with fire protection rules and measures communicated in any form by the manager or work head, as appropriate;
- Make use of hazardous substances, facilities, equipment, machinery, devices, according to the technical instructions and those given by the manager or work head, as appropriate;
- Not to perform unauthorized maneuvers or unauthorized modification of fire protection systems and installations;
- Communicate to the workplace manager immediately after finding any breach of the fire safety rules or any situation set by him/her as a fire hazard, and any fault found at the fire protection systems and facilities;
- Cooperate with employees appointed by the manager, as appropriate, and the fire protection specialized technical unit of in order to apply fire safety measures;
- To act in accordance with the procedures set at the workplace, in the event of any imminent fire danger;
- To provide authorized persons with data and information he/she knows regarding fire ocurrence.

Construction, equiment and installation contractors must:

- Achieve full and timely fire protection measures contained in the project, complying with the applicable laws;
- Ensure fire safety measures are taken during the execution of works and site development;
- Ensure functioning of fire protection equipment provided in the documentation for execution within the designed parameters before commissioning.

Blocking or diminishing the size of the access rods by storage of materials, equipment or packaging is prohibited. It is mandatory to check the evacuation routes daily to maintain their state of practicability.

The following are forbidden along the entir evacuation route:

- arranging work places or activities along the evacuation routes, including those which are temporary that reduce their size and not included in the project;
- prohibiting hiding signs and panels marking evacuation routes and fire extinguishers by depositing various materials.

Independent of the season, access and intervention routes are maintained practicable, clean and free of any obstacles, materials, equipment, packaging, snow, which might impede firefighting efficient intervention.

3.2. Fire prevention and fire fighting

At all stages of design and execution the provisions of the rules and general provisions for fire prevention and fire-fighting as well as the specific regulations of safety in case of fire are complied with. The project has been drawn up to meet the provisions of the Normative technical acts so as to allow for the implementation and operation of the objective in complete safety and health, both for the staff of execution and for operating personnel.

The fire-fighting equipment is placed in a visible and readily accessible position and verified at the time limits specified in the instructions given by the supplier.

The execution of the works with an open flame in places with a risk of fire is authorized only after taking measures to prevent fire and fire-fighting equipment necessary and after obtaining the permit or the authorization to work with the fire. These works are carried out only by teams trained for this purpose and equipped with work, protection and intervention equipment.

At the end of the work, the leader of the working compartment will verify:

- The stop of all machinery and equipment;
- The cleaning of the workplace and the disposal of waste;
- Removing the voltage of all electrical portable appliances devices connected to the flexible harness.

Upon the execution, after completion of the work, during regular operation, it will be checked if outbreaks of fire have not been created in the area of the pipelines and technological installations.

In view of first intervention in the event of fire it is provided that:

- The organization of the teams with concrete, with the training carried out in accordance with the norms;
- Measures and possibilities for alerting the firemen units (civil services), for example to ensure a fixed or mobile telephone line to announce the firemen in the event of a fire.

Chapter 3. Measures of defense, fire prevention and fire-fighting

3.1. Fire safety measures

The performance criteria which must be ensured throughout the execution of the works and during the use (operation) are: the risk of outbreak of fire, resistance to fire, preventing the spread of the fire, the behaviour to fire of the building, the stability to fire the structure of resistance, access routes, exhaust and intervention.

It can be concluded that through the concept of fire prevention the following conclusions may be reached:

- The organization of the activities of defence against fire;
- The management of the risks of fire (identification, evaluation and control);
- Equipping with technical means of intervention in the event of fire, substances for extinguishing and accessories;
- The achievement of the quality requirement of `security to fire` of the constructions;
- Partnership and cooperation with the various factors in the various fields of activity and at different decision making levels;
- Carrying out the actions of public information,
- The dynamics of the elaboration of decisions.

For the objective which is the subject of the project it is necessary to take the following measures for defence against fire, both during execution and during operation, i.e. the execution of maintenance works:

- The prohibition of the execution of any welding or cutting with open flame near combustible materials;
- The generator of acetylene will be installed in the course of work at a minimum distance of 12 to 15 m from any source of fire: welding arch, open flame, glowing bodies, cigarettes, etc.;
- At the end of work, the generator for acetylene will be dumped and will be washed properly; it is strictly forbidden to leave the generator still in position and loaded with carbide and gas on the inside;
- The manipulation of the oxygen and acetylene tubes will be done with the protective caps and rings of rubber fitted, with great attention and avoiding the tapping and compromising them; at the same time, the tubes of oxygen and acetylene will be stored in places away from solar radiation.
- Smoking is forbidden in the vicinity of the generator for acetylene;
- In case bitumen furnaces are used, they will be located in places away from the movement of equipment and personnel and the transport of the melted bitumen will be done only with approved devices, the workers using the appropriate personal protective equipment: rubber boots, gloves, safety goggles, overalls, etc.;
- Staff working in the radius of the machinery electrically actuated or within the range of electrical network will be trained to avoid electric shock.
- The coupling of the designed pipeline to the pipelines in operation is made only by written order from the Beneficiary and on the basis of a detailed work program with the points of intervention and clear measures, with responsibilities per operators.

For the pipeline coupling – decoupling works and gas installations `by fire` (welding, cutting in metal, working with tools producing sparks) the following measures must be taken:

- The pipeline works will be carried out only with special devices and tools for this kind of operations, only by the trained personnel and on the basis of a schedule drawn up in particular, signed by the

competent bodies of the constructor and the recipient and also under the direct supervision of the delegates;

- Any work `with fire` will not be started without ` THE HOT WORK PERMIT`, issued by the head of the unit of the beneficiary of the installations to which they are employed; this permit will indicate the preventive measures to be taken in order to begin working with fire;
- The hot work permit (Annex No 4 to the General Rules of Defence Against Fire, approved by Order no. 163/2007) is valid for a single day; for continuing the works a new permit will be issued on each working day; during the working hours, the license must be at the person approved to execute the work;
- The installations and pipelines at which the works are to be executed will be delivered to the constructor by the beneficiary, on the basis of a report which will mention that they are prepared in accordance with the minimum requirements for safety and health at work and the rules governing the defence and protection against fire in the relations generated by the contract or the Convention, - being able to work with them with an open flame and with tools producing sparks;
- It is prohibited to execute welding operations or operations which could produce sparks from plants during the operation of any machines or gas pipelines in operation at related facilities to those in operation;
- The foreman, the head of the team and the workers will not start working before the fulfilment of all the measures referred to in the license for the work with fire;
- The works `with fire` should be stopped immediately if in the course of their execution, independently of taking the necessary measures, `gas leaks` are identified in the vicinity of the place (point) of work;
- Where the conditions provided for by the rules for working with an open flame are not ensured and where it is possible, the portion of the facility or the pipeline at which they are to work will be displaced from the nearest flanges, following previous emptying and are transported in a place where they can work with the fire; after the execution of the operation, the portion of the facility (or the section of the pipeline) is transported and installed again in the installation (or pipeline); both the removal and the mounting will be carried out using the antispark tools;
- It is prohibited to get close with the flame, working with tools that can produce sparks, welding and machinery access at a distance less than 35.00 m of the equipment in operation;
- In all cases where there is a danger of training an explosive mixture the following measures will be taken:
  - The prohibition of smoking and of working with an open flame;
  - Avoidance of sparks;
  - Closing the gas by handling the line valves;
  - The immediate evacuation of the gas from the pipelines and installations by special tools (pressure dischargers, safety valves, etc...);
- Upon the commissioning of the pipelines and new installations, modified or repaired it will be necessary to discharge air from the pipelines and the related installations, leaving to pass at the opposite end to the one that introduces the gases, a quantity of gas representing 2 to 3 times the volume of the pipelines and of the facilities; when on the construction site there appear problems the designer will be required to prepare special procedures, so that the execution may to be carried out without the unwanted events.

3.2. Fire prevention and fire fighting

At all stages of design and execution the provisions of the rules and general provisions for fire prevention and fire-fighting as well as the specific regulations of safety in case of fire are complied with. The project has been drawn up to meet the provisions of the Normative technical acts so as to allow for the implementation and operation of the objective in complete safety and health, both for the staff of execution and for operating personnel.

The fire-fighting equipment is placed in a visible and readily accessible position and verified at the time limits specified in the instructions given by the supplier.

The execution of the works with an open flame in places with a risk of fire is authorized only after taking measures to prevent fire and fire-fighting equipment necessary and after obtaining the permit or the authorization to work with the fire. These works are carried out only by teams trained for this purpose and equipped with work, protection and intervention equipment.

At the end of the work, the leader of the working compartment will verify:

- The stop of all machinery and equipment;
- The cleaning of the workplace and the disposal of waste;
- Removing the voltage of all electrical portable appliances devices connected to the flexible harness.

Upon the execution, after completion of the work, during regular operation, it will be checked if outbreaks of fire have not been created in the area of the pipelines and technological installations.

In view of first intervention in the event of fire it is provided that:

- The organization of the teams with concrete, with the training carried out in accordance with the norms;
- Measures and possibilities for alerting the firemen units (civil services), for example to ensure a fixed or mobile telephone line to announce the firemen in the event of a fire.

Chapter 4. The list of fire prevention and extinction facilities

It is not the case for this work. The valve stations will be provided with fire estinguishing systems at the pressure discharge valves. At each valve fire extinguisher cabinets will be installed.

Annex 5 - List of contact persons and addresses

No.	Unit name	Contact person	Phone number
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

Annex 6 - Main subcontractors

No.	Unit name	Activity	Contact person	Phone number
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				

Annex 7 - Legal requirements

The table below contains a list of information on the legislative Romanian system, framework laws, regulations and specific rules. The list contains not only the specific rules for the construction work (e.g. - specific rules of safety at work from the excavation, foundations, earthworks, levelment and consolidation of the land), but also the general rules and specific requirements to be carried out for the project.

Whereas Romania has transposed into the national legislation the greater part of the European Directives, should be enough reference to Romanian law. At the same time the European Directives must be regarded as the documents with compulsoriness character and must be considered as totally applicable in the framework of the project (in particular in the situation in which they are missing, partially or totally, from the national legislation).

The entire set of laws to which reference is made in this document can be found on the website protectiamuncii.ro for consultation. However, each supplier has a contractual (and legal) obligation to hold on the construction site the set of laws related to the works carried out.

In the case of foreign subcontractors (which are not Romanians), they have the obligation to comply with any law (Law of the country of origin) relating to their services. The general contractor will not accept subcontractors which do not comply with the legal requirements in Romania.

No.	Romanian Normative Act	Topic	European directive transposed	Date of the entry into force
1.	L 319/2006 O.G. 646/26.07.2006	The law on safety and health at work	89/391/EEC	01.10.2006
2.	G. R. 300/2007 O.G. no 252/21.03.2006	On the minimum health and safety requirements for temporary or mobile work sites	92/57/EEC	01.01.2007
3.	G. R. 493/2006 O.G. no 380/03.05.2006	On the minimum health and safety requirements regarding the exposure of workers to the risks arising from the noise	2003/10/EC	01.09.2006
4.	G. R. 971/2006 O.G. no 683/09.08.2006	On the minimum requirements for safety signs and/or health at the place of work	92/58/EEC	01.10.2006
5.	G. R. 1028/2006 O.G. no 710/18.08.2006	On the minimum requirements for safety and health at work relating to the use of the display screen equipment	90/270/EEC	01.10.2006
6.	G. R. 1048/2006 O.G. no 722/23.08.2006	On the minimum health and safety requirements for the use by workers of personal protective equipment at the workplace	89/656/EEC	01.10.2006
7.	G. R. 1050/2006 O.G. no 737/29.08.2006	Concerning minimum requirements to ensure the safety and health of workers in the mineral-extracting industries and drilling	92/91/EEC	01.10.2006
8.	G. R. 1051/2006 O.G. no 713/21.08.2006	On the minimum health and safety requirements for the manual handling of	90/269/EEC	01.10.2006

No.	Romanian Normative Act	Topic	European directive transposed	Date of the entry into force
		heavy objects which pose a risk for the workers, especially of dorsolumbar diseases		
9.	G. R. 1058/2006 O.G. no 737/29.08.2006	On the minimum requirements for improving the safety and health protection of workers which may be exposed to a potential risk due to the occurrence of explosive	1999/92/EC	01.10.2006
10	G. R. 1091/2006 O.M. no 739/30.08.2006	Concerning minimum requirements at the place of work	89/654/EEC	01.10.2006
11	G. R. 1092/2006 O.G. no 762/07.09.2006	On the protection of workers from the risks related to exposure to biological agents at work	2000/54/EC	01.10.2006
12	G. R. 1093/2006 O.G. no 757/06.09.2006	Laying down the minimum requirements for safety and health requirements for the protection of workers from the risks related to exposure to carcinogens or mutagenic at work	2004/37/EC	01.10.2006
13	G. R. NO. 520/2016 O.G. no 769/11.09.2006	On the minimum health and safety requirements regarding the exposure of workers to the risks caused by electromagnetic fields	2004/40/CE	01.10.2006
14	G. R. 1875/2005 O.G. no 64/24.01.2006	On the protection of the health and safety of workers from the risks related to exposure to asbestos	83/477/EEC with changes 91/382/EEC 98/24/EC 2003/18/EC	01.09.2006
15	G. R. 1876/2005 O.M. no 81/30.01.2006	On the minimum health and safety requirements regarding the exposure of workers to the risks arising from vibrations	2002/44/EC	01.09.2006
16	G. R. 1218/2006 O.G. no 845/13.10.2006	On the minimum health and safety requirements for ensuring the protection of workers from the risks related to exposure to chemical agents at work	98/24/EC, 2006/15/EC	06.09.2006
17	G. R. 1146/2006 O.G. no 815/03.10.2006	Concerning the minimum safety and health requirements for the use by workers of the special protective equipment at the workplace	89/655/EC	01.10.2006
18	G. R. 1425/2006 O.G. no 882/30.10.2006	The detailed rules for the enforcement of the law on the safety and health of no 319/2006		01.11.2006

Annex 8 - Risk Assessment on the site

The risk assessment is the identification of all sorts of dangers (the risk factors) present in the framework of work processes, quantifying their size based on the combination between the two parameters: the seriousness and the frequency of the maximum possible consequent impact on the human body by the occurrence of accidents at work and occupational diseases, and the establishment of measures for the prevention and protection necessary to eliminate or reduce occupational risks.

To establish the **measures needed** to improve the level of safety of the system of work to be analysed it is appropriate to take account of the hierarchy of the assessed risk in accordance with the scale for the classification of the levels of risk/ security at work in the order:

- 7 - 1 if operating with the levels of risk;
- 1 - 7 if operating with the levels of security.

Also take account of the order of generic precedence of preventive measures, namely:

- Measures for the intrinsically prevention;
- Collective protection measures;
- Individual protection measures.

The scale of quotation of the gravity and the probability
The consequences of the action of the risk factors on the human body

Classes of gravity		**GRAVITY OF CONSEQUENCES**
Consequences		
1	NEGLIGIBLE	– Minor reversible consequences with a foreseeable incapacity for work up to 3 calendar days (healing without treatment)
2	SMALL	– Reversible consequences with a foreseeable incapacity for work for 3 - 45 days which requires medical treatment
3	AVERAGE	– Reversible consequences with a foreseeable incapacity for work between 45 - 180 days which requires medical treatment and hospitalization
4	LARGE	– Irreversible consequences with a reduction in the work capacity of not less than 50 %, the man being able to provide a professional activity (invalidity pension of the IIIrd degree)
5	SERIOUS	– Irreversible consequences with 100 % loss of the capacity of work, but with the possibility of self-service, of self-control and spatial orientation (invalidity pension of the IInd degree)
6	VERY SERIOUS	– Irreversible consequences with the total loss of the capacity of work, of the self-service, of the self-conduct or spatial orientation (invalidity of the Ist degree)
7	MAXIMUM	– Death
Classes of probability		**PROBABILITY OF CONSEQUENCES** (likely frequency of occurrence of consequences)
Events		
1	Extremely rare	extremely low **P >10 years**
2	Very rare	very low **5 years < P < 10 years**
3	Rare	less than **2 years < P < 5 years**
4	Less frequent	average **1 year < P < 2 years**
5	Frequent	high **1 month < P < 1 year**
6	Very frequent	very high **P < 1 month**

The scale for the classification of the levels of risk/security

RISK LEVEL		GRAVITY - PROBABILITY	LEVEL OF SECURITY	
1	Minimum	(1.1) (1.2) (1.3) (1.4) (1.5) (1.6) (2.1)	7	Maximum
2	Very small	(2.2) (2.3) (2.4) (3.1) (3.2) (4.1)	6	Very high
3	Small	(2.5) (2,6) (3.3) (3.4) (4.2) (5.1) (6.1) (7.1)	5	High
4	Average	(3.5) (3.6) (4.3) (4.4) (5.2) (5.3) (6.2) (7.2)	4	Average
5	High	(4.5) (4.6) (5,4) (5.5) (6.3) (7,3)	3	Small
6	Very high	(5.6) (6.4) (6.5) (7,4)	2	Very small
7	Maximum	(6.6) (7.5) (7,6)	1	Minimum

A. General risk assessment on the site

a) Assessment sheet

Site		Assessment Sheet	The exposure duration: 8 - 10 h/shift The security coordinator			
COMPONENT OF WORK SYSTEM	IDENTIFIED RISK FACTORS	CONCRETE FORM OF MANIFESTATION OF THE RISK FACTORS (Description, parameters)	MAXIMUM FORESEEABLE CONSEQUENCE	GRAVITY CLASS	PROBABILITY CLASS	RISK LEVEL
0	1	2	3	4	5	6
MEANS OF PRODUCTION	MECHANICAL RISK FACTORS	1. Components of machines in motion - pinch, drive by the drive shafts with couplings, with belts or through the trees or actuations of the equipment or hand tools	IIIrd degree invalidity	4	4	4
		2. The projection of the bodies to polidisks and drilling machines	IIIrd degree invalidity	4	4	4
		3. The free fall of tools, materials from the upper dimensions of the building or from the means of transport	IIIrd degree invalidity	4	4	4
		4. Areas or dangerous contours - direct contact of the skin with the cutterbar, crisp slippery surfaces (glass, abrasive materials, nails, steel concrete)	ITM 3-45 days	2	5	3
		5. Catching, hitting or crushing of the means of transport with materials on the site or public road	Death	7	2	4
		6. Shifts under the effect of the gravity of the various parts, materials, prefabricated during unloading, handling or storage, repair or demolitions of constructions (slippage,- over bars, rollover, free-fall, subsidence, breakdown)	Death	7	3	5
		7. Pressure vessels used on the construction site: tubes with oxygen, butane cylinders, acetylene, compressed air	Death	7	1	3
		8. Vibrations at the use of the mallet system to the breakage of the reinforcement	Negligible	1	1	1
	ELECTRICAL RISK FACTORS	9. Electrocution caused by direct touch - contacts and uninsulated conductors and mat or with the aging insulation in the electrical panels on the sites or from the recipients, power cords with damaged insulation	Death	7	1	3

Site		Assessment Sheet	The exposure duration: 8 - 10 h/shift The security coordinator			
COMPONENT OF WORK SYSTEM	**IDENTIFIED RISK FACTORS**	**CONCRETE FORM OF MANIFESTATION OF THE RISK FACTORS (Description, parameters)**	**MAXIMUM FORESEEABLE CONSEQUENCE**	**GRAVITY CLASS**	**PROBABILITY CLASS**	**RISK LEVEL**
		10. Electrocution caused by indirect Touch - The links of electrical equipment installations at the earthing system at the points of work with high degree of corrosion, special shoes; accidentally pierced insulations	Death	7	2	4
	CHEMICAL RISK FACTORS	11. Flammable substances - Work with petrol, thinners, paint strippers, varnish and paints	Death	7	1	3
		12. Explosive substances (staples, petrol, etc.)	Death	7	1	3
		13. Toxic substances used for the painting	Death	7	1	3
WORKING ENVIRONMENT	PHYSICAL HAZARD FACTORS	14. High humidity - during the periods of the next rainy season of the year	ITM 3-45 days	2	1	1
		15. Air currents due to working with the windows open, in particular before closing the holes	ITM 3-45 days	2	2	2
		16. High level of noise due to mastery of small-scale mechanization and portable tools	Invalidity degree III	4	2	3
		17. Pneumoconiogene particles (cement)	Death	7	1	3
		18. Natural disasters (thunderstruck, flood, wind, hail, limned, slippage - collapse of land or trees)	Death	7	1	3
	CHEMICAL RISK FACTORS	19. Gases or vapours are flammable or explosive vapours - the thinners, paint strippers, varnish and paint	Death	7	1	3
	BIOLOGICAL RISK FACTORS	20. Micro-organisms in suspension in the air when working in the uncleaned channels	ITM 3-45 days	2	1	1
WORKING TASKS	PHYSICAL OVERLOAD	21. Working Positions forced in fact, static effort, dynamic effort during the execution of the various works for demolitions or repair of buildings with the terms of the unfavourable organization	ITM 3-45 days	2	5	3
	PSYCHIC OVERLOAD	22. Tough decisions in a short period of time carried out in the environment with noise	ITM 3-45 days	2	3	2

Site		Assessment Sheet	The exposure duration: 8 - 10 h/shift The security coordinator			
COMPONENT OF WORK SYSTEM	**IDENTIFIED RISK FACTORS**	**CONCRETE FORM OF MANIFESTATION OF THE RISK FACTORS (Description, parameters)**	**MAXIMUM FORESEEABLE CONSEQUENCE**	**GRAVITY CLASS**	**PROBABILITY CLASS**	**RISK LEVEL**
		23. Increased rhythm of the high volume of works in short time of execution and at the pressure of the beneficiary	ITM 3-45 days	2	5	3
		24. Operations of repetitive short cycle, in particular in the work of the finishing, mounted tiles, tiles, coatings, masonry, bodywork paint workshops, etc.	ITM 3-45 days	2	3	2
	INCORRECT CONTENT OF THE WORK TASK	25. Wrong operations, rules and procedures, in particular in the case of work with no execution details, or with insufficient details, or unsuitable for the technical equipment of the company	Death	7	1	3
		26. The omission of some technological operations in order to save or steal materials, or to win time	Death	7	1	3
		27. Incorrect working methods (wrong sequence of operations), from the desire to simplify and finish the operation faster	Death	7	1	3
CONTRACTOR	WRONG ACTIONS	28. The defective execution of orders in case of concrete mixer lorries and portable tools	ITM 3-45 days	2	5	3
		29. Misuse of the means of protection of the equipment	Invalidity degree III	4	5	5
		30. The defective execution of manoeuvres - on the use of equipment in the equipment of the site (elimination of chief guardians)	Invalidity degree.III	4	5	5
		31. Drop to the same level by imbalance, slipping, tripping on the surfaces of the movement and of work on the construction site.	ITM 45-180 days	3	5	4
		32. Non synchronous operations, in particular when working within the team (chain of workers)	Invalidity Degree III	4	2	3
		33. Starting outside the task of employment of existing equipment on the construction site	Death	7	1	3
		34. Stopping or the supply to the outside of the load to work with the equipment on the construction site	Death	7	1	3

Site		Assessment Sheet				
			The exposure duration: 8 - 10 h/shift			
			The security coordinator			
COMPONENT OF WORK SYSTEM	**IDENTIFIED RISK FACTORS**	**CONCRETE FORM OF MANIFESTATION OF THE RISK FACTORS (Description, parameters)**	**MAXIMUM FORESEEABLE CONSEQUENCE**	**GRAVITY CLASS**	**PROBABILITY CLASS**	**RISK LEVEL**
		35. Journeys, the vehicle has been parked in hazardous areas on scaffolding, the roofs, channels, hostels etc.	Death	7	3	5
		36. Journeys with danger of falling from a height by stepping in an open hole, by imbalance or slipping	Death	7	3	5
		37. Risk of accident from communication in particular because of the noise and the distance between the performers	Death	7	1	3
	OMISSIONS	38. Non-use of personal protective equipment and other means of protection equipment	Invalidity Degree III	4	4	4
		39. The deliberate omission of operations of work	Death	7	4	6

b) Measures proposed

MEASURES PROPOSED			THE SITE	
No.	**Risk factor symbol**	**RISK FACTOR**	**The level of risk**	**MEASURES PROPOSED (measure nomination)**
1	F39	The deliberate omission of operations of work	6	**Organizational measures:** ↵ The supervision of the work with demanding and experienced personnel ↵ Periodic checking of compliance with the instructions of work ↵ The application of disciplinary sanctions for those who do not comply with the instructions of the work and labour protection
2	F6	Shifts under the effect of the gravity of the various parts, materials, prefabricated materials	5	**Organizational measures:** ↵ The supervision of the operations of unloading, charging, handling and storage of the head of the team ↵ Storage and handling of materials in compliance with the rules of labour protection in force **Technical measures:** ↵ Equipping with racks and special devices for fixing parts and materials with special forms
3	F29	Misuse of the means of protection of equipment	5	**Organizational measures:** ↵ Performance of additional training of workers when it is used on the construction site a technical equipment for the first time with the modality to use the protectors.
4	F30	The defective execution of manoeuvres on site	5	**Organizational measures:** ↵ The training of the workers on how to perform the manoeuvres on the construction site ↵ The supervision of the implementation of the manoeuvres by personnel with experience
		Travels and stop in hazardous areas		**Organizational measures:** ↵ The instruction of the workers on the hazardous areas existing on the site and of the accident risk factors that is manifested in these areas ↵ The presentation of preventive measures taken by the employer in these areas

MEASURES PROPOSED			THE SITE	
5	F35		5	↵ Presentation of expected behaviour of workers in these areas **Technical measures:** ↵ The mounting of panels or warning plates regarding the existing dangers ↵ Fencing hazardous areas ↵ The granting of personal protective equipment, as appropriate
6	F36	Danger of falling from height, losing balance or slipping	5	**Organizational measures:** ↵ The improvement of labour protection information at the places of work by installing suggestive posters warning on the danger of falling from height and showing a labour protection film on this theme ↵ Systematic cleaning at the places of work and the removal from the traffic area of the pieces of materials (pipes, steel concrete, bricks, etc.) ↵ Marking and signalling holes and floor frames of buildings under construction **Technical measures:** ↵ Blocking floor and wall holes and their fencing with resistant rails ↵ Mounting of rails for diggings, channels, pits ↵ The use of modern inventory scaffolds, labour protection certificated
7	F1	Components of machines in motion - assembling, driving	4	**Organizational measures:** ↵ The regular training will be performed each time and practical demonstrations on the modality of working with each equipment ↵ The prohibition for the operating personnel to intervene on the machines ↵ Carrying out the maintenance and repair works by authorized personnel or specialized companies only
8	F2	Design of bodies	4	**Organizational measures:** ↵ The training and testing of personnel on the use of each technical equipment provided. ↵ The carrying out of practical demonstrations during the place of work training and regular training on the use of each technical equipment ↵ Prohibition to use the technical equipment lacking mounted protectors foreseen by the manufacturer of the equipment.

MEASURES PROPOSED			THE SITE	
				↵ The use in the production of only the technical equipment certificates from the point of view of occupational safety and bearing the marks CE or CS of security. ↵ The performance of the equipment service and repair works in accordance with the schedule.
9	F3	The free fall of tools, materials	4	**Organizational measures:** ↵ Training workers on working with tools on scaffolds ↵ Proper storage of materials at the execution of the works at several levels of the same building ↵ The prohibition of working without a protective helmet on site **Technical measures:** ↵ Execution of protection flooring in the road and traffic areas ↵ Fencing work areas where there is a risk of falling of materials ↵ The mounting of protection nets
10	F5	Catching, hitting or crushing by the means of transport	4	**Organizational measures:** ↵ Regulating the movement of motor vehicles at the site premises (establishing the access to the premises, the traffic ways, the sense of movement, the maximum speed, etc.) ↵ Supervising of loading and unloading works regarding the motor vehicles ↵ Prohibition to make manoeuvres with motor vehicles without control ↵ Prohibiting to carry out transportation by means of transport inadequate for the materials which are transported **Technical measures:** ↵ The mounting of the traffic indicators on site
11	F10	Electric shock caused by indirect touch	4	**Technical measures:** ↵ The use of the two protective measures: one main and one additional against electric shock by direct touch ↵ Checking in accordance with the rules of the electrical resistance of the power supplies
				Organizational measures:

MEASURES PROPOSED			THE SITE	
12	F31	Falling from the same level by losing balance, slipping, tripping on the site traffic and work areas.	4	↵ Systematic cleaning at the places of work and the removal from the traffic area of the pieces of materials (pipes, steel concrete, bricks, etc.) ↵ Maintenance in good conditions of the traffic routes on site ↵ Cable routes crossing above pedestrian and vehicle routes ↵ The removal of the ice from the traffic areas ↵ Appropriate organization of the activity of recovery of waste and recyclable materials
13	F38	Non-use of personal protective equipment and other means of protection	4	**Organizational measures:** ↵ Taking into account (in the Rules of Procedure of the company) the non-use of the personal protective equipment as a serious misconduct that can lead to the dismissal of the relevant employee ↵ The discussion of the PPE list with the representatives of the employees and its approval only after acknowledgement by employees ↵ Stimulation of the workers who are in the proper use of the PPE and sanctioning of those who break the rules in this field.

a. Models of periodic assessment

No.	Risk class	Risk factors	It does not exist	It partially exists	It exists	Place of event	Event form
1	**Mechanical Hazards**	The mechanical resistance of certain parts of the system Friction Moving parts of the installation Spring elements, e.g. the spring compressor Liquids and gases under pressure					
2	**Electrical Hazards**	Direct contact Electrostatic process Working in the vicinity of the overhead cables or high voltage control panels Electromagnetic interference					
3	**Thermal risks**	The direct consequence of the short - circuit Danger to health presented by working at extreme temperatures Steam exhaust and hot liquids Thermal radiation, fire or explosion					
4	**The risks presented by the system**	Noise Vibration Radiation					

No.	Risk class	Risk factors	It does not exist	It partially exists	It exists	Place of event	Event form
5	**The risks presented by the chemical substances**	Safety data sheets					
6	**Indirect risks**	Lightning Storm Electric discharges, flood					
7	**Risks produced by the operation of the deficiency**	Fault control system Systems adjustment failure Power cut-off Computer and software failure					
8	**Risks of products at the putting into operation and maintenance**	Access to the work space Cut of energy sources Cleaning Brutal handling					

Location: The system:		Assessment No.: Work:					Date: The procedure :	
		Date/Signature:	Service resp. OHS Date/Signature:					
No.	**Risk factors**	**Potential risk/loss Person Subgroup**	**System Current checks**	**Degree of risk**			**Additional measures**	**The remaining risk**	
				S	**L**	**R**		**R**	**Grade**
0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1	Hypothermia Drowning, working in the neighbourhood of water	Serious injury or death, all pers. in the danger zone	Construction site access control Work permission Protection measures, risk assessment	3	1	3	Treated in the specific procedure	3	
2.1	Falling from height, frames, stairs, scaffolds	Serious injury or death, The entire staff Personal commissioning	OHS coordination Verification: frames, stairs, scaffold Trained/skilled personnel	3	1	3	Safety harness if required Treated in the specific procedure	3	
2.2	Falling from a height of more than 5 m	Serious injury or death, The entire staff	OHS coordination Verification: frames, stairs, scaffold Trained/skilled personnel	3	3	9	Safety Harness Treated in the specific procedure	3	
3.1	Falling objects In the work space or access paths	Serious injury or death, The entire staff Personal Operational tests	Daily check by supervisor OHS coordination Trained/skilled personnel	3	2	6	Quality cleaning Additional protective equipment	3	

3.2	Falling objects Simultaneous work at different levels	Serious injury or death, The entire staff	Daily check by supervisor OHS coordination Trained/skilled personnel	3	3	9	Quality cleaning Additional protective equipment Controlled access in the working area	3	
4	Load hitting while lifting Being lifted	Serious injury or death, The entire staff Personal Operational tests	OHS coordination Trained/skilled personnel Certified Equipment	3	2	6	Protection measures and/or assessment risks regarding lifting and heavy weights Lifting system for tandem lifting	3	
5.1	Electric shock Operational test of systems	Serious injury or death, HV- the entire staff Personal Operational tests	Work permit Protection measures at operational tests Access control: electrical wiring, barriers	3	2	6	Operational tests co-ordination procedure with partners and suppliers	3	
5.2	Electric shock during use of tools or equipment	Serious injury The entire staff Personal Operational tests	Certified equipment Trained/skilled personnel OHS coordination	3	2	6	Check before use, proper tool use Training for tools/special equipment Switch boards at all working levels	3	
5.3	Electric shock at voltage system connection	Serious injury or death, The entire staff Personal Operational tests	Trained/with experience OHS coordination Reporting faults/interruptions	3	2	6	Warning signs Appropriate cable routes Special marking of powered systems	3	
6	Asphyxiation in enclosed spaces	Serious injury or death, All employees in the danger zone	Access control in the work space Work permit Protection measures, risk assessment	3	1	3	Additional protective equipment Additional ventilation Special supervision of the work The analysis of the air before the entry of the employee	3	
7	Locking in pits, pipes, valves	Serious injury The entire staff Personal Operational tests	OHS coordination Trained/skilled personnel	3	2	6	Handrails, barriers Pit and pipes covers	3	
8	Manual handling	Request , tripping The entire staff	Trained/skilled personnel Use of lifting/handling tools Verification of lifting devices/handling	2	3	6	Toolbox Discussions	3	
9.1	Dust eye injury	Disturbances to the The entire staff Personal Operational tests	Trained/skilled personnel Personal protective equipment	2	2	4	Quality cleaning Cleaning with water of access roads	2	
9.2	Weld flame eye injury	Disturbances to the The entire staff	Access control in the work space Trained/skilled personnel OHS coordination	2	1	2	Protection in the area welding is performed	2	
10	Noise	Hearing disorders All persons in the area of influence	Access control in the work space Trained/skilled personnel Specific personal protective equipment	2	1	2		2	
11.1	Falling caused by uneven or wet surfaces	Easy injury All persons that are in the The danger zone	Suitable access to workplace Personal protective equipment Temporary warning signs	1	1	1		1	

11.2	Falling caused by an unexpected obstacle	Easy injury All persons that are in the The danger zone	Personal protective equipment Regular cleaning of access roads	1	1	1	Appropriate lighting	1	
12	Burns generated by working with fire	Burns, scalding The entire staff	Trained/skilled personnel Personal protective equipment	2	1	2	Warning signs	2	
13.1	Fire	Serious injury or death, All persons that are in the The danger zone	OHS coordination Emergency plan exercises Site access control	3	1	3	Regular training, Toolbox discussions	3	
13.2	Fire generated at mounting, E. g.:working with fire	Serious injury or death, The entire staff	Temporary emergency plan (fire extinguisher) Work permit	3	1	3	Removing materials and flammable wastes	3	
14	Gas generated by assembly works (paint, working with fire)	Difficulty in breathing The entire staff	Appropriate temporary ventilation COSHH risks assessment OHS coordination	2	3	6	Removing materials and flammable waste additional protection equipment (gas mask, dust mask)	3	
15	Collision of vehicles on site (excavator, units, vehicles)	Serious injury or death, All persons on the construction site	Training drivers Trained/skilled driver Regular check of machinery moving parts	3	2	6	Additional road signs Speed limiter The Rule of three mistakes for dangerous driving	3	
16	Contact with chemical materials (paints, solvents)	Volcanic The entire staff	COSHH substances risk assessment Personal protective equipment	3	1	3	Controlled access in the working area If requested, use a gas mask	3	
17	Penetration of COSHH substances in work rooms	Serious injury All persons that are in the The danger zone	COSHH substances risk assessment Protection measures at storage and disposal COSHH substances	3	1	3	Rapid communication of incidents Treated in the specific procedure	3	
18	Exposure to radiation	Serious injury All persons that are in the The danger zone	Protective measures, risk assessment OHS coordination Work permit	3	3	9	Controlled access in the working area for other employees Supervision of the x-ray area during the works Information of all parties on site	3	
19	The excessive influence of electromagnetic radiation	Easy injury All persons in the area of influence	Risk assessment plan OHS coordination	1	1	1		1	
20	Low efficiency in the case of work at over 1,000m above sea level	Air of the mountain All people with extended stay on the construction site	Health control	1	1	1		1	
21	Political instability, endangering by other persons	Serious injury or death, All persons on the construction site	OHS coordination Site security Site access control	3	1	3		3	
22	Gas or liquid under pressure (compressed air, vapours, natural gas)	Serious injury or death, Personal Operational tests Personal Pressure Tests	Work permit Protective measures, risk assessment OHS coordination	3	2	6	Quality test plan Treated in the specific procedure	3	
23	Deep digging	Serious injury The employees in the area of underwater	Protective measures, risk assessment OHS instructions on site G CC HSM 011 Mark in the calendar of safety measures Drawing up the list of control	3	1	3	Treated in the specific procedure	3	

24	Works carried out simultaneously by several suppliers	Serious injury All persons that are in the The danger zone	Protective measures, risk assessment OHS coordination	3	1	3	Treated in the specific procedure		
25	The existence of contaminated soil	Volcanic The employees in the area of underwater	Protective measures, risk assessment Environmental procedure G CC QMS 015	3	2	6	Treated in the specific procedure Cooperation with the OHS team of the beneficiary		
26	Work with asbestos	Serious injury or death, Employees work workbench	Prohibition of asbestos Special caution for demolition works	3	3	9	Treated in the specific procedure		
27	Removing/installing the prefabricated heavy components	Serious injury Employees work workbench	OHS coordination Trained/skilled personnel Certified equipment	3	2	6	Treated in the specific procedure		
28	Fragile roofs	Serious injury Workers in construction	Protective measures, risk assessment Trained/skilled personnel	3	1	3	Treated in the specific procedure		

Annex 9 - Working Procedures

1. Purpose

The purpose of this labour protection management procedure is to establish the manner of organization for the preparation of the training and use of the Statements of method and to provide information about the procedures of work and the protection measures taken in the case of work presenting risks. The Statements of method are an essential component of a system of work in safety conditions, together with the assessment of the risk and a proper system of granting of the work permit.

2. Field of application

This procedure for labour protection management is valid for all the actions of the contractor relating to the site work and will be sent to all the partners, subcontractors and their subcontractors.

3. Referenced documents

The management of occupational health and safety - General Principles
The management of occupational health and safety - Application in the projects
Standard OHS Plan

4. Preparation of working procedures

The definition of the object of the Statement of the method is based on the assessment of the risks and will be made for any work presenting risks and when necessary.

Each of the site work constructors must prepare working procedures in accordance with the work carried out. The working procedures will be drawn up in accordance with this procedure, in due time before the beginning of the works, enabling the training of the employees carrying out the work, and will be reviewed by the coordinator. The employees to perform the works and, if appropriate, other subcontractors involved in the relevant works will be trained in accordance with the statement of the method. Special attention will be granted to the labour protection measures. Each contractor will present a register with the working procedures prepared. The working procedures will be regularly reviewed to ensure the acquisition of the experience gained by the execution of the works. If there are significant changes in the working procedures and/or working conditions, the working procedures will be revised and amended accordingly.

General working procedures:

The general working procedures are prepared in the usual way for the base work of the contractors and are applied for the repetitive activities, having a low degree of risk.

Special working procedures:

The special working procedures are drawn up for the special activities, involving an increased risks.

5. The content of the working procedures

The statements of method must comprise at least the following:

- The page establishing the project details and location (document number) in accordance with the site document rules;
- Date, printing and signature of the person responsible;
- The plans of the execution and drawings necessary for a clear understanding ;
- The sequences of work step-by-step, with explanations regarding the execution of the work;

- Including the study and the positions of the crane, the location of the scaffolds, the access to the work point, etc.;
- The potential risks and the labour protection measures for each work step;
- The preventive measures to be taken for the occupational health and safety and the protection of the environment;
- The work permit requirements;
- The training of and guidance to the employees carrying out the work;
- The required level of personnel and the necessary qualifications;
- Name and qualification of the persons which supervises the work, inspect and approve the working areas, working methods, security measures in the organization chart;
- The names of the persons trained in accordance with the work procedure;
- Occupational health and safety laws, codes and standards - those applicable;
- Facilities, equipment and tools to be used and details of their verification and state of maintenance;
- The necessary individual protective equipment;
- The noise assessment and the risk assessment, where appropriate ;
- The time schedule of the work with the detailed execution programme;
- Special restrictions, prohibited issues or elements that should be avoided, where appropriate;
- Separate sheet with the assessment of the risks of particular works if they are not treated separately;
- The inspection and tests plan, if not dealt with separately.

Annex 10 - The Requirements of the Contractor

1. Purpose

The purpose of this procedure is to define the terms and conditions for partners and subcontractors with regard to project occupational health and safety (OHS) and environmental protection related to the works. This procedure is drawn up on the basis of own labour and environmental protection standards representing the minimum requirements that must be met and they require compliance with all national project applicable regulations.

2. Scope

This guide is applicable to all activities related to the works on the procurement and management of supplies and services covered by the contract.

3. Referenced documents

The applicant`s system management documents;

The extended questionnaire for the assessment of supplier`s and subcontractor`s understanding of the OHS and environmental protection problems;

The questionnaire for suppliers and subcontractors.

4. Definitions and abbreviations

The OHS Plan	The occupational health and safety plan
The EP Plan	The environmental protection plan

5. Requirements

The following OHS ad EP conditions apply to partners and subcontractors in the various stages of the project:

5.1. Pre-qualification

The following documents must be submitted by partner members and subcontractors in the pre-qualification stage:

- Information in accordance with the questionnaire.

5.2. The tendering stage

In addition to the information contained at 5.1, the following must be provided:

- The project site management
- The qualification of the personnel responsible for labour and environmental protection in the context of the project concerned
- OHS and EP Plan model to assess compliance
- An overall assessment of the site risks and examples of working procedures
- The risk analysis in the case of dangerous substances;
- Information under the extended questionnaire for the evaluation of the understanding by the supplier of the labour and environmental issues

The products supplied by partners or subcontractors will be tested to prove compliance with the labour protection regulations e.g. risk analysis, EC certification.

5.3. The project execution stage

The contractor will make available the OHS and environmental protection documentation and will implement the OHS and environmental protection program in accordance with the contractual terms and conditions and documents of the project and will take the necessary measures that all the conditions are imposed on suppliers and subcontractors in an appropriate manner. The following obligations must be fulfilled:

- Compliance with all applicable laws and of the relevant standards for the project and establishing the tasks of the subcontractors ;
- Compliance with the OHS plan and the environmental plan drawn up by the general contractor ;
- Carrying out an assessment of the risks to the elements supplied in the design stage ;

- Identification of hazards, assessment of risks, the preparation of procedures for the control of the risks (working procedures) and informing the general contractor with regard to all these aspects ;
- The general contractor has the authority to assess whether the risks are assessed correctly and if the definition of risk control is correct and more than that, if the risks affect the work of the other subcontractors.
- These documents will be forwarded to the general contractor for approval.
- The immediate informing of the general contractor in the event of an accident, incident, injury, imminent danger, and dangerous conditions.
- The general contractor has the authority to decide whether there is a need for complementary preventive measures to avoid further accidents and if it is necessary to amend the OHS Plan.
- The transmission to the general contractor of the relevant information for the OHS register.
- Compliance with the provisions of the OHS Plan
- Compliance with the indications given by the general contractor
- Transmission of information to its employees.

All staff carrying out any work on site will be informed and properly trained, so as to know the risks, the measures for emergency situations, the OHS and environmental protection rules and the risks arising from the works of the other subcontractors. The reports will be accompanied by documents and will be kept by the contractor.

Reports and relevant information with regard to the OHS and environmental protection will be presented in accordance with the conditions of the contract. At least the following documents must be submitted:

- Plans and information in accordance with the implementation;
- Working procedures drawn up ;
- The risk analysis in accordance with the scope of the activity ;
- The certificates of the tests (documents relating to the testing of materials and equipment used) ;
- Details on the methods of execution: specific methods, including all the information needed for the safe execution of changes and demolitions ;
- The materials used (especially those dangerous or unusual) ;
- Equipment and maintenance details;
- Procedures and requirements for maintenance, planning maintenance ;
- The operation and maintenance manual;
- Details on the location and the nature of the services, measures for emergency situations, fire prevention, etc. ;
- The execution registers, site investigation registers;
- Reports of deviation ;
- Reports in the event of an accident/incident ;
- Photos ;
- All the information referred to above relating to the suppliers/subcontractors of subcontractors ;
- Any other information as specified in the contract
- All other information required by the law ;
- Documents concerning the environment, such as the labels for waste, storage protocol, reports of investigation, water analysis, etc. ;
- If the design work is carried out by the contractor, following additional information must be provided:
  - All plans performed by the designer ;
  - Criteria for the design, declarations of design, construction facilities, demolition ;
  - Checks, scheduled maintenance ;
  - Approval of planning, construction permit ;

Extended questionnaire for the assessment of the subcontractor`s understanding of the OHS and environmental protection issues

1. Who is the person with the highest management position in your enterprise responsible with the OHS and environmental protection issues and what qualifications are needed for this position?
2. Who is the person authorized to contact in the OHS and EP issues with the health, safety,

environmental authorities and other legal bodies?
3. Is your enterprise part of an industrial/professional group?
4. What is the experience of your enterprise in OHS and EP issues in projects of this type?
5. What is the experience of your enterprise in the activities carried out in accordance with construction, engineering and management rules?
6. How are business strategies and site achievements monitored?
7. Which is your business organized from the perspective of management and control of issues related to labour, health and the environmental protection?
8. How do you make sure that your employees have the legal authority and practice to carrying out the works in complete safety conditions?
9. Please provide a list of the key personnel involved in the OHS and EP aspects and their position. Which is their official qualification ?
10. What site active and reactive monitoring performance systems has your enterprise?
11. Provide details regarding your OHS and EP performance over the past five years, specifying the incidence rate, frequency and level of accidents.
12. Has it ever happened to that your enterprise stops an important project because of concerns regarding labour security?
13. Over the last five years has any of your employees or subcontractors have suffered:
    - a deadly accident?
    - a serious injury?
14. NB : Please give details for each situation.
15. Over the last five years have you delivered projects with:
    - improvement notes?
    - Prohibition note?
16. Please give details for each situation.
17. What procedures does your enterprise use for the investigation of accidents or of serious incidents?
18. How do you describe the general principles of accident prevention? Based on the control hierarchy what measures do your employees take to prevent hazards?
19. Has your enterprise got a reporting system for the situations of imminent site danger?
20. How do you rate:
    - that a danger to health leads to sickness or occupational diseases
    - the seriousness of the consequences?
    - the assessment of the potential risks associated with tasks
21. What measures do your employees take for:
    - the assessment of the potential risks associated with their tasks?
    - to ensure the achievement of a safe work system
22. Within your project, the typical occupational safety management system consists of what?
23. How would you describe a safe labour system? How do you implement a safe labour?
24. How do you make sure that a safe work method is communicated to and followed by the employees?
25. What measures exist for understanding labour safety at the level of the new employees and subcontractors?
26. What measures apply to your enterprise to positively influence the individual conduct of employees?
27. Has your enterprise site incentive scheme? Provide details.
28. Are there issued work procedures for all those works, your works or the subcontractors` works presenting risks?
29. Does your enterprise submit safety data sheets) prior to the commencement of the works?
30. What measures does your enterprise take for the risks presented by the hazardous substances on site and outside the site?
31. Are there procedures for waste management ?
32. Do you have employees trained in local or national standard? Provide statistical data.
33. What are the modalities for information, training and training of employees at all levels?
34. What type of training program does your enterprise use to ensure achievement and maintenance of the standards; how do you make the documentation of the training and who is in charge of it?

35. Can you provide a copy of your training plan?
36. How do you deal with a problem relating to either your employees or your subcontractors once it is found?
37. Describe the site supervision/surveillance modalities.
38. Please provide information (CV) about the personnel employed on site in OHS and EP issues and in the position of supervisors.
39. Is the site supervisor also OHS and EP responsible? If yes, indicate the time dedicated to the OHS issues.
40. Which procedures has your enterprise for the pre-qualification and assessment of the subcontractors?
41. What assessment modality does your enterprise use to assess a supplier from the point of view of labour protection performance?
42. Do you have standard control lists for inspections? Provide a list of such inspections.
43. Could you provide a general risk assessment and a general statement of method for the works you may be responsible of?
44. Could you provide risk assessment and work procedures for similar works?
45. Do the legal certificates of inspection regarding the units and equipment are kept on site?

Employers' obligations

1. To adopt from the research, design and work execution stage solutions in accordance with the labour protection rules, the security standards and the specific regulations by the application of which the risks of accidents and professional diseases may be eliminated or reduced to the minimum.
2. To ensure risk assessment for the safety and health of the employees to establish preventive measures, including the choice of technical equipment, the chemical substances and preparations used, arrangement of the place of work, etc. The employer must provide for the assessment of the risks of accident and professional diseases for all places of work.
3. To ensure the OHS auditing of the unit using the competent institutions.
4. To request the authorization of the unit from the perspective of labour protection and to ask for its review in the event of a change in the initial conditions for which it has been issued.
5. To establish the technical and organizational labour protection measures, corresponding to the labour conditions and risk factors assessed at the place of work to ensure the safety and health of the employees.
6. To establish in the job description the duties and responsibilities of the employees and other participants in the process of work in the field of labour protection, according to the properly exercised position.
7. To prepare own work safety instructions with these rules and occupational safety specific rules appropriate to the activity which is carried out.
8. To provide for the employees who work on a limited duration the same level of protection as for the other employees.
9. To take measures to ensure the materials necessary for informing and training the employees, normative acts, tests, safety data sheets.
10. To ensure the informing of each person, prior to employment, with regard to the risks to which he/she will be exposed at the place of work and to the fire-fighting and prevention measures and evacuation in the event of an imminent danger.
11. To ensure that the employees of the units from the outside, who works in its unit, have received adequate instructions relating to the risks for their security and health.
12. To ensure that the resources for the training, testing, formation and development of the staff responsible with labour protection.
13. To take measures for the authorisation of the exercise of the jobs and professions in accordance with the regulations in force.
14. To hire only persons who as a result of the medical control correspond to the work assigned to them out.
15. To take the necessary steps for informing the labour protection department with regard to the employees working over a limited period of time or temporarily.
16. To ensure periodically or whenever appropriate, the verification of emissions to be within the allowed limits, by measurements carried out by competent bodies.

17. To establish and keep records of the work places with special hazard and to identify the work places where imminent danger may occur.
18. To ensure continuous and correct operation of protective devices and systems, measuring and control instruments, and installations for collection, retention and neutralization of harmful substances from the technological processes.
19. To ensure that the equipment, maintenance, checking of personal protective equipment and individual work equipment and not to allow the performance of any activity by its employees without the proper use of the equipment.
20. To grant at the recommendation of the doctor sanitary materials and protective food.
21. To ensure the proper medical supervision of the health risks to which employees are exposed in the course of their work.
22. To ensure the occupational risk exposure sheet for each employee exposed and its supplementation each time production process changes occurs.
23. To draw up the nominal record of employees with disabilities and of those under the age of 18 years.
24. To immediately notify occurrence of a technical failure, events, work accidents or occupational disease to the Territorial Labour Inspectorate and the competent court authorities, according to the law.
25. To make the documents available and to give the information requested by the labour inspectors following control or work accident investigation.
26. To ensure the implementation of the measures laid down by the labour inspectors following control or work accident investigation.
27. To appoint or to appoint at the request of the labour inspector the persons participating in the control or work accident investigation.
28. To take measures not to change the status of fact resulting from the occurrence of a deadly or collective work accident, except for the cases when the maintenance of this status would generate other accidents or failure with serious consequences or would jeopardise the life of the victims or other employees.

OHS OBLIGATIONS OF EMPLOYEES

1. To acquire and follow the labour protection rules and instructions and the measures taken for their implementation.
2. To use the technical equipment, hazardous substances and other means of protection correctly.
3. Not to proceed to the arbitrary disconnection, changing or removal of the safety devices of the technical equipment and of the buildings and to use these devices correctly.
4. To bring to the attention of the work place manager any technical failure or any other circumstance which constitutes a danger of injury or professional diseases.
5. To bring to the attention of the work place manager as soon as possible the work accidents suffered by herself/himself or other employees.
6. To stop the wok at the imminent danger for the occurrence of an accident and to inform as soon as possible the work place manager
7. To refuse with reasons the execution of a task of work if this would put in danger of injury or cause professional diseases to herself/himself or to the other participants in the production process.
8. To use the personal protective equipment in the purpose for which it was granted.
9. To cooperate with the employer and/or with the employees with specific OHS responsibilities to give the employer the possibility to ensure that all the labour conditions are met and present no risks to the OHS.
10. To cooperate with the employer and/or with the employees with specific OHS responsibilities as long as it is necessary for carrying out any tasks or requirements imposed by the competent authority for the prevention of accidents and occupational diseases.

Annex 11 - Plan for emergency situations

Procedures for emergency situations

Preventive measures

In order to ensure the effectiveness of the plan for emergency situations all persons on the site must be properly trained. All persons on the site are obliged to comply with the procedures of the contingency plan and to strengthen knowledge about the emergency measures, e.g. by repeated use of emergency exits and routes, checking significance of labour protection signs, etc.

For a correct behaviour in emergency situations the indications established in the annexes below will be followed:

Annex 16 `General Rules in alarm situations` (telephone numbers, alarm signals, first aid, ambulance, etc),

Annex 10 `Plan of evacuation in the event of a fire, emergency exits, assembly points, first aid units` (in the event of fire, explosions, evacuation, etc.).

In addition, in the case of emissions of substances hazardous to health, the instructions contained in the Safety Data Sheet (SDS) must be followed.

The site manager has the obligation to ensure that all emergency exits and assembly points are clear at all times, and in the case of their change, all persons on site are informed.

In case of an announcement of a potential danger, all persons on site have the obligation to inform immediately the project manager.

Alarm systems must be regularly checked/tested (see **Annex 12** `Evacuation Plan`).

Announcement of emergency situations

The person who becomes aware of an emergency situation will immediately inform his/her superior, who in turn will immediately inform the company manager (see `General Rules in case of alarm situations`)

The following information must be sent:

- Type of emergency
- The exact location of the emergency situation and the location of the person notifying
- What happened (injury, fire)
- What measures intends to take the person making the announcement (e.g. saving injured persons, fire-fighting, etc.)

The following rule must be observed at all times:

1. **ALARM**
2. **HELP**
3. **SAVE/FIRE STOP**

Behaviour in emergency situations

In emergency situations, the staff of the site is announced by an acoustic signal (see `General Rules in alarm situations`)

General rules in emergency situations:

- Stay calm;
- Do not use the elevator;
- Do not run at the locker room, toilet, etc.;
- Do not lose time with recovery of belongings;
- Comply with the instructions site supervisor;
- Do not leave the place of the meeting until the signal for the termination of the alarm.

In the event of an emergency situation which imposes the evacuation of the site (the audible evacuation signal) the site staff will proceed in accordance with **Annex 12** of the OHS Plan, `Evacuation Plan`.

Behaviour in the case of an accident

In the event of accidents the following steps must be taken:

- Avoiding the accident area;
- Searching for first aid (trained person for first aid) ;
- Ensuring first aid ;
- If possible, the injured person will be transported at the first aid point for medical care given by qualified staff for a first aid ;
- Informing the site supervisor about the accident ;
- Calling the ambulance, firemen, hospital, as needed (see `General Rules for alarm situations`);
- Provide information to the accidents reporting system;
- Analysing the causes of the accident ;
- Eliminating the cause of the accident ;
- All site employees are informed and trained under the OHS Plan about ways to avoid accidents similar ;
- Checking efficiency of removing cause of accident;
- The accident is reported for the statistics ;
- Notification depending of the situation (employer, site director).

Fire Prevention

The location of the fire extinguishers, hydrants for hoses of the fire brigade and fire alarms are on the **Sheet 2**, Plan for fire-fighting, emergency exits, assembly points, first aid units'. The emergency phone numbers are on **Sheet 1** `General rules for alarm situations`.

Preventive measures

- Training of all persons on site with regard to fire prevention ;
- Obey of specific rules in areas where smoking is forbidden ;
- Ash disposal in non-flammable containers;
- Storage of flammable material so that it does not obstruct the ways of exit ;
- Keeping the exit routes, exits and assembly points clear at all times ;
- Maintaining the visibility of the protection signs and indicators (e.g. emergency exits, first aid) ;
- Free access to fire extinguishers ;
- Keeping free access to rescue paths and enabling access of firefighters by not parking;
- The performance of work with fire only in accordance with the work permit system;
- The daily discharge of flammable waste;
- Regular checking of the extinguishers and other equipment (according to the law).

Behaviour in the event of fire

- if to save persons you must go through the rooms/barracks on fire, cover yourself in a wet blanket;
- open with caution doors, because the rapid inflow of air causes rapid increase of flames;
- in rooms full of thick smoke crawl or lean to get out;
- call the victims` names, find them and save them;
- if your clothes are on fire, do not run, roll yourself on the ground it;
- throw an overcoat, a blanket/non-flammable blanket on the persons whose clothes are on fire;
- to extinguish fire, use extinguishers, water, sand, earth, wrappings, etc.;
- throw water from upside down on vertical areas on fire;
- liquids on fire are extinguished with sand, earth, heavy blankets;
- electrical installations are switched off only after the prior interruption of the source of energy;
- exit from the area on fire in the direction from which the wind blows;
- incendiary aviation bombs are extinguished by covering with earth or by immersion in water reservoirs;
- the napalm drops on clothes are extinguished by covering with thin layered cloth, clay or sand ;
- mixtures on the basis of phosphorus or sodium are extinguished by isolation with earth, sand, tight coatings;

- apply on the affected body areas dry and clean bandages and seek medical care;In a minor fire event use the extinguisher located closest to the fire and the fire must be reported to the administrator (in case of doubt, follow the instructions for major fires)
- In major fire event notify immediately the fire brigade and the company manager.
- The audible alarm signals are followed and if necessary act according to `The evacuation plan` in **Annex 12** of the OHS Plan.

Unexploded ammunition

The general term of ammunition includes:
- cartridges for military, sports and hunting weapons;
- projectile weapons;
- bombs or missile launcher;
- reactive ammunition;
- torpedoes;
- mines;
- cartridges of signals;
- fireworks;
- grenades;
- bombs;
- any items that are loaded with explosive substances.

When coming across such ammunition, follow these rules:
- do not touch them;
- do not hit or move them;
- do not put them on fire;
- do not try to remove warheads or other components;
- do not let children play with such components;
- do not lift, transport or put unexploded ammunition in rooms or piles of old iron;
- where it is assumed that there is unexploded ammunition, do not allow access, do not heat and do not execute works, etc.

When you become aware of their existence, immediately notify the nearest police station and the County Inspectorate for Emergency Situations (112).

Dangerous substances

In case of a leakage or the emission of hazardous substances the following procedures will be followed:

- If the substance is known, the safety data sheet procedures will be applied.
- If the substance is not known and it is assumed that it endangers health and safety (smell, smoke, smouldering), immediately inform the manager of the company. If it cannot be contacted, immediately call the fire brigade.
- Independent of the situation, leave the danger zone.

Comply with the procedures of the environmental plan (the `Ready for emergency situations` programme)

Responsibilities

The site manager is responsible for the general site security. He/she is supported in matters of labour protection by the person in charge of the OHS and environment protection.

The site manager represents the centre coordinating all measures taken in an emergency situation.

The project manager is informed in emergency situations .

Instructions

Instructions for site safety

1. Instructions for fire extinguishers
2. Behaviour in the event of fire
3. Important signs
4. Safety data sheets (contained in the EP)

Instructions for site OHS

The site labour protection instructions are used in addition to the others, to ensure site safe conditions, being the key elements of site work safety .

The following rules are applied:

- Compliance with the work safety instructions
- Communication of work safety instructions before the beginning of the works
- Updating the work safety instructions for objective reasons (e.g. accidents), in which case the changes will be communicated before the beginning of the works.

The project OHS instructions applicable to Transgaz workers are:

- Own OHS instructions for pipeline and related installations operation and maintenance
- Own OHS instructions for pipeline mechanical locksmith - team intervention
- Own OHS instructions for crane operator
- Own OHS instructions for motorist
- Own OHS instructions for welder
- Own OHS instructions for electrician
- Own OHS instructions for driver
- Own OHS general Transgaz instructions

The applicable OHS instructions for each type of work carried out under the project by the workers of the contractor will be submitted to the site security coordinator.

If the site work security instructions are not obeyed by the employees the `Rule of the three mistakes¬ will be applied as defined in **Annex 14**.

Note: **Alcohol and drugs are strictly prohibited on site. Any violation of this rule will be followed by the immediate removal from the site of the person in question.**

Annex 12 – Evacuation Plan

General information

The entire site staff must be trained to ensure the efficiency of the Evacuation Plan. The emergency procedures will be followed from the appearance of the emergency situation until the restoring of site safety.

The occurrence of an emergency situation

An emergency requiring evacuation occurs if:

- Hazardous substances or dangerous objects are discovered
- There is a dangerous situation which expands and endangers other persons
- There are persons exposed to a dangerous situation of which they are not aware and therefore they cannot take preventive measures

The evacuation procedure

- At the notification of an emergency situations any person on site has the obligation to notify the other persons, to inform his/her superior and, if possible, the persons in the vicinity (by shouting, noise, signals etc.) and to immediately contact the site management. The relevant person must remain in the office to provide detailed information to the site management, firemen, beneficiary and representatives of the authorities.
- After the assessment of the situation, the site manager, and, in the absence the OHS responsible person will start the alarm in accordance with the `General rules in alarm situations`.
  Note: The alarm can be also given by the fire brigade (e.g. the fire brigade of the centre)
- When hearing the alarm all persons on site must move to the exits, emergency exits, assembly points, according to the poster `Emergency exits, assembly points, first aid`. If possible, the machinery in operation will be secured (e.g. mechanical securing by anchoring, interruption of electrical supply of motors, etc.)
- As far as possible it is checked that all persons in the area are evacuated.
- Depending on the type of the emergency situation the relevant authorities will be inform (e.g. in case of a bomb the police will be informed first).
- The site supervisor will inspect closely the area of danger (as far as possible) in order to be able to assess whether and how the area in question can be isolated from the rest of the site.
- If the area in question can be isolated, the site supervisor may decide to continue the work in the areas which are not exposed to the danger and can terminate the alarm according to the poster `General rules for alarm situations`.
- The site manager or his/her delegate or (e.g. the site OHS responsible person) will remain in the isolated danger zone and will ensure that the safety of the relevant area was restored; the staff executing works in the vicinity will be trained with regard to the measures taken and the restrictions imposed.
- The site manager will solve the emergency situation and will be in touch with the authorities and the beneficiary in accordance with the legal regulations and the CC specific OHS Management System and will inform the unit management and the board member responsible.

Checking the alarm system

The alarm system will be checked regularly by activation, each Monday of the month at 10.00 am, by the site security coordinator. The checking and the results (of the repair and re-verification) will be recorded.

If the constructor site manager initiates an alarm situation exercise, such exercise will be reported.

The documentation

This Evacuation Plan is part of the Contingency Plan which is part of the OHS Plan. All changes will be recorded in documents and communicated in the work safety instructions, in accordance with the OHS Plan procedures. The evacuation reasons will be identified and appropriate measures will be taken in order to avoid a similar event in the future. The measures will be recorded in documents and communicated to all persons on the construction site in accordance with the OHS Plan procedures. A copy of the documentation will be submitted to the OHS site coordinator.

Documents of reference:

- Poster `General rules for alarm situations`
- Poster `Fire prevention, emergency exits, assembly points, first aid`

Annex 13 - Procedure for reporting incidents/accidents

Purpose

The aim of this procedure is to ensure the reporting of accidents/incidents enabling

- immediately emergency aid
- establishing of tasks to mitigate consequences
- protection of areas which are likely to be affected
- provision of information
- preparation of reports in a systematic way
- definition of cause of accident and measures for the prevention of recurrence of the accident

Scope

This procedure is applicable the project:

Definitions

Accident	-	Any event resulting in loss and damage
Fatal accident	-	A serious incident is defined as an event with catastrophic consequences endangering human lives such as falling structures, scaffolding or any other incident causing multiple injuries.
Incident	-	The event which may lead to injury and may result in injury and damage
Major accident	-	The incident that leads to injury which causes interruption of work for more than 3 days
Minor accident	-	The incident that leads to injury which causes interruption of work for less than 3 days
Imminent danger	-	Accident or incident which has a high level potential risk of injury or significant damage to property
Site OHS responsible/technician	-	Site OHS responsible or the subcontractors` doctor or OHS responsible

Class 'A' for reporting accidents and incidents comprises:

- Cases requiring first aid
- Cases of restriction of work

Class `B` for reporting accidents and incidents comprises:

- All accidents which result in interruption of business
- Fatal injury
- Any incident having serious severity and frequency risks (according to the definition given by the site OHS responsible/technician or by the site manager) and which requires preventive measures which must be communicated to all persons on site.

Regarding reporting accidents, employees will notify immediately to the authorities any incident that leads to injury which causes interruption of work for more than 3 days. Information will be made by telephone and will be followed by a written investigation report, according to the Accident Investigation Form.

Responsibilities

The OHS site responsible of each supplier/subcontractor
will monitor:

- the filing-in of a standard report and the coordination register in accordance with these provisions within 24 hours from the occurrence of the incident and the submission of the report to the contractor`s manager.
- immediate reporting of class B incidents to the contractor`s manager.
- informing the authorities with regard to all accidents by the employer in accordance with the Romanian laws
- recording by the employer of the event in the company Register of Events.

The site supervisor of the supplier/subcontractor

The site supervisor of the supplier must submit to the contractor`s manager the Accident Investigation Form immediately after its signature by all parties, including the representatives of the local authorities.

The contractor`s manager

In addition to the overall responsibility concerning site work safety, he/she has the obligation to report accidents/incidents in accordance with this procedure. In work safety issues the site manager is assisted by the OHS coordinator.

The site OHS responsible

In addition to the responsibility to supervise site work safety, the site OHS responsible, at the request of the manager, will establish appropriate measures which must be taken to avoid immediate accidents or future accidents, will prepare the accident and labour protection reports, statistics, etc.

Instructions

This procedure was divided into two stages, class A form, which relates to minor accidents and allows the OHS responsible/technician to keep a record of all incidents and accidents in order to determine the directions of the project. All of the minor accidents are recorded in the Register of Minor Accidents.

The class B form will be drawn up in such a way as to allow the efficient investigation of any serious accident or incident for analysing the causes. For all employees on site the assurance company form must be filled-in.

All serious accidents will be recorded in the Register of Serious Accidents. The official investigation will be performed by completing the accident investigation form.

All major incidents which have not resulted in injury, but presents a potential risk of injury must be recorded in the Register of Incidents.

Ceasing work

Fatal accident, serious incident

In the event of a fatal accident or serious incident the partner/supplier will immediately cease work in the relevant area in an orderly manner and in stages, with the exception of those works, e.g. concrete casting requiring continuation for the prevention of further structural problems.

Immediate verification of security

The subcontractor will make an immediate and systematic check of work safety for the whole area of execution of the contractor concerned. This check will be monitored and audited by the representative of the beneficiary and the contractor`s manager or the site OHS responsible/technician. The purpose of this verification is to verify work security in the relevant area, so that there is no risk of the recurrence of the accident or of a similar accident. Any area/actions considered not safe must be immediately isolated and/or rectified. The site OHS responsible/technician of the contractor has the right, if it considers it necessary, to extend the audit to the entire site.

Resuming work

The activity will not be resumed until the relevant area is safe for work execution again. The subcontractor will acknowledge by signature work safety, from all points of view, for each sector of the area. The representative of the beneficiary will also sign the acknowledgement and will authorize the resuming of work, on sectors where appropriate. The site OHS technician may provide for further measures if he/she considers that labour protection is not secured properly.

In the event of a fatal accident, work is not resumed until the arrival on site of the local authorities' representatives and their approval for the continuation of the work.

Reporting procedure

In the event of a fatal accident, the partner/supplier will immediately inform the contractors` manager and together they will announce the local authorities by phone

Phone numbers are listed in the poster `General rules for alarm situations`.

The supplier will carry out the investigation together with the local authorities. A copy of the final report signed will be submitted to the site manager of the contractor immediately after receipt by the supplier.

The reports of accidents/incidents will be included in the monthly work safety reports.

Fatal accidents

In the event of a fatal accident the employer must notify the family of the deceased and solve all aspects of insurance and compensation.

Preparation of the accident statistics

For OHS monthly meetings the accident statistics is drawn up by the site OHS technician.

The form used is identical from the perspective of information structure with the accident reporting form.

For statistics, see the Accidents Monthly Statistics form.

Incident report forms guide

The accident/incident reporting form is included in Annex 12 of the OHS Plan

Form

This form must be used for all employee accidents on site.

Class B Investigation Results Form

The site technician/OHS responsible must fill in the investigation results sheet of the relevant company based on the following indications.

Note: The site OHS responsible coordinates the preparation of such reports and will establish (together with the company manager) an investigation team to identify the factors which have caused the incident.

a) <u>Direct causes</u> - dangerous actions or conditions which may be identified in the following.

<u>Dangerous actions</u>	<u>Dangerous conditions</u>
1) use of machinery without having the necessary qualification	1) incorrect barriers or protection railing
2) incapacity to warn or train	2) inadequate/inappropriate protective equipment
3) incapacity to ensure protection	3) defective tools, equipment or materials
4) acting outside limits of the project	4) congested or restricted areas of work
5) removing a protective device	5) inadequate warning systems
6) using malfunctioning equipment	6) hazardous chemical substances
7) non-using of the personal protective equipment	7) cleaning
8) inappropriate lifting techniques	8) exposure to noise

9) inappropriate person / material location	9) exposure to radiation
10) incorrect working position	10) extreme temperatures
11) repairing of equipment in operation	11) too weak / too strong lighting
12) activity outside of the job task	12) poor ventilation
13) influence of alcohol, drugs and medical products	13) other situations identified
14) other	

Note: The dangerous conditions must describe the actions or omissions which led directly to the accident.
The dangerous conditions must describe situations, systems, equipment and any other elements which should have existed for the prevention of the accident.

b) <u>Base causes</u> - the conditions that led to the act or situation which caused the accident may include the following:

- The inability to react in a special situation (training in the event of a new procedure, newly employed personal, equipment, process and/or new materials).
- The lack of instructions (do not exist or were not transmitted)
- The inability to correct the existing situation.
- Instructions / training inadequate or inexplicable
- Superiors did not explained `why`
- Superiors did not listened to what they were communicated
- Duties and tasks are not clear
- Pressure of immediate tasks
- Instructions given by too many decision-makers
- Avoiding taking a decision
- Lack of coordination/team work
- Ineffective coordination
- Faulty checks and maintenance works
- Ineffective work coordination or check which determines faulty site conditions.
- Too large /small work volume
- Labour force reduction, fluctuation/lack
- Task is not suitable for a particular person

c) <u>Fundamental causes</u> - general types of deficiencies that lie at the basis of the chain causing accidents are the following:

- Procedures - poor quality of existing procedures concerning the application, availability, realism and understanding, generated by:
  - preparation by an inappropriate team
  - lack of information of the employees with regard to procedures
  - absence of requirement to establish tasks in the procedure.

- Conflicts of interest - from:
  - Conflict between construction/mounting and OHS techniques
  - Conflict between financial priorities and OHS techniques
  - Conflict between individual priorities and OHS techniques.

- Communication - the difficulty from:
  - language problems, cultural barriers
  - lack of a clear communication line

- Material - quality, availability of tools and equipment, generated by:
  - wrong components purchased/used.

- equipment deficiencies.

- Design
  - poor equipment design criteria

- Ambient/external conditions – situation which can have negative effects on a person or on the place of work resulting from:
  - Low spirits from incorrect application of rules, insufficient discipline, change of rules, etc.
  - Physical damage from long work under pressure, etc.
  - Personnel unable to deal with or to react under special or emergency situations
  - Incorrect information or undelivered.

- Preparation - deficiencies in training and knowledge from:
  - School training not in accordance with the job requirements
  - Ineffective training
  - Training not suitable for the staff
  - Various acts or omissions can be also influenced by cleanliness or other site conditions

d) `Remediation actions and details taken at present`

Provides short details on the actions initiated or to be taken to prevent recurrence.

1. Prioritised action plan

Shows in detail the measures to be taken, including change in procedure, training programmes etc. with fixed deadlines.

2. The investigation team

Will be established by the project supervisor or site OHS responsible/technician, which will appoint the members of the investigation team and the person signing the report.

Investigation Details Form

This form is at the basis of all class B reports and must be completed by the person responsible for the supervision of the activity.

In this report the supervisor must provide his/her own version of the facts, giving details, pertinent information and a brief statement on the instructions given, including training at the place of work or any other information given, making the connection between his/her actions and which might have led to the incident.

Continuation Sheet Form

It will be used for class A and B reports and provides written witness statements, comments on the investigation and any other details necessary for the general report.

Accidents Monthly Statistics Form

Accident statistics is initiated in conjunction with the opening of the site and will be issued monthly by all site undertakings. Information will be cumulative covering the entire duration until the completion of the works of the relevant firm.

Local Government Forms

In accordance with the implementation provisions of Law 319/2006 and the Rules for its application for accidents with injury, standard forms will be used.

According to the OHS Plan and the Romanian law the forms must be completed by the employer (each contractor subcontractor, supplier, etc.) and submitted to the general contractor which in turn will send them to the local authorities.

These forms were discussed above.

All forms must be made available to the site general manager of the constructor for inspection.

Event Operative Communication Form

<table>
<tr><td>Sheet no.</td><td rowspan="3">COUNTY

CITY</td><td colspan="3">Name of employer where the accident occurred:
SC _____SRL</td><td colspan="2">Address

Phone number</td></tr>
<tr><td>NACE code</td><td colspan="3" rowspan="2">Name of employer where the injured person is/was employed</td><td colspan="2">Address
Phone number</td></tr>
<tr><td>Date/Time of occurrence</td></tr>
<tr><td rowspan="2">The date of the communication:</td><td rowspan="2">Event occurrence place</td><td colspan="5">VICTIMS</td></tr>
<tr><td colspan="2">Surname
Name</td><td colspan="2">Surname
Name</td><td>Surname
Name</td></tr>
<tr><td>Name/position of the person who communicates:</td><td>Medical unit where the injured person was admitted:</td><td colspan="2">Job:
Years of service:
Years of service at the place of work:
Age:
Marital status:
Children in care:
Other persons in care:</td><td colspan="2">Job:
Years of service:
Years of service at the place of work:
Age:
Marital status:
Children in care:
Other persons in care:</td><td>Job:
Years of service:
Years of service at the place of work:
Age:
Marital status:
Children in care:
Other persons in care:</td></tr>
<tr><td colspan="3">ACCIDENT</td><td colspan="2" rowspan="3">DANGEROUS INCIDENT:</td><td colspan="2">Classification decision INV</td></tr>
<tr><td colspan="3">Collective</td><td colspan="2">Individual</td><td>No./Date</td><td>Degree</td></tr>
<tr><td>No. of victims</td><td>Of which deceased</td><td>Evident invalidity</td><td>Invalidity</td><td>Death</td><td></td><td></td></tr>
<tr><td colspan="8">Description of the circumstances which are known and possible causes for the occurrence of the event:</td></tr>
<tr><td colspan="6">The consequences of the accident (in case of death, mention the date and time of death):</td><td colspan="2">Marital status:
C - married
D - divorced
N – not married</td></tr>
</table>

Annex 14 - The rule of three mistakes

This procedure is applicable to all contractor sites

Its purpose is to strengthen and improve the safety and health conditions by instructing the employees breaching site rules and the OHS rules by improper operation.

If it is considered that the actions of an employee endanger the security and safety of the contractor site staff, it has the right to act in stages, in accordance with the rule of the three mistakes:

- 1 deviation: Verbal warning, followed by the notification of the employer;
- 2 deviation: Fine applied to the employer;
- 3 deviation: Removal from site of the entire team and the notification in writing of the employer,
  Return on site only with the consent of the site manager and after re-training.

In the event of a serious disobeying of the site work security provisions, the OHS adviser, the security coordinator, the contractor`s manager has the right to dismiss immediately and permanently the relevant employee.

Drinking alcohol and using drugs are considered a serious disobeying of the site work security rules and will be followed by the immediate and permanent removal from site of the relevant employee.

Annex 15 – Work Permit Template

WORK PERMIT

For the contractor/subcontractor_____
to whom between_____2016 and_____2016, _____-_____ , is allowed to perform the following works:_____
_____
_____
Work location:_____
_____
The team of workers consists of the following members:

_____ _____ _____
_____ _____ _____
_____ _____ _____
_____ _____ _____
_____ _____ _____
_____ _____ _____
_____ _____ _____
_____ _____ _____
_____ _____ _____
_____ _____ _____

Equipment and tools used_____
_____
_____
Special conditions:_____
The condition of area at site delivery_____
_____
The condition of area at the end of the work period:_____
_____
Notes:

1. The work permit is issued daily for working with the fire, weekly for other works and may be extended by a maximum of one calendar week.
2. The changing of the working conditions require the changing of the work permit.
3. It is the responsibility of the Constructor to complete and request the issuance of the work permit.
4. Working without permit or without an appropriate work permit entail the cessation of works until the issuance of the permit and the penalization of the contractor at penalty level 2. In case of events, it is the contractor`s full responsibility in accordance with the law.
5. At the expiration of the work permit validity the contractor has the obligation deliver the work area at least as received. The consequences of any kind caused by damage, lack of cleanliness, debris left which are found at the expiration of the work permit validity will be borne by the constructor.
6. During the execution of the works strict observance of the OHS and contingency situations laws in force is mandatory. The contractor is responsible for complying with such laws and inform on possible risks at site delivery.
7. At the issuance of the work permit, the OHS and contingency situations training sheets of the workers will be completed and updated in accordance with the work task to be executed.
8. Any drawings must be made on the back.

Date:_____ _____ _____
(Project Manager) (Head of work-surname, name, phone, legibly, signature)
Extension:
Date:_____ _____ _____
(Project Manager) (Head work- surname, name, phone, legibly, signature)

SNTGN TRANSGAZ Medias
Sector/P.L._____

WORK PERMIT FOR WORK WITH FIRE

No. ..... of ……..

This work permit for work with fire is issued to Ms/Mr.....helped by Ms/Mr……, who will execute....., using…… at (in)……. The works will begin on....., at ……., and end on on....., at ……..

During the execution of the works and at the end of such works the following measures must be taken:

1. Removal from or protection of combustible materials in the area of execution of the work and in its vicinity, over a distance of ..... meters as follows:

.....

.....

2. Emptying, insulation, washing, pipes, equipment or installation ventilation through:

.....

.....

3. Ventilation of spaces in which the work is carried out as follows: ……

.....

4. Checking the area of work and its vicinity, removing sources of ignition and the conditions that might generate fire and explosion, fire protecting of materials in the area.

5. The works with fire were initiated based on analysis report no…….. ... of ....., issued by ..... (where appropriate) .

6. Compliance with the rules for defence against fire, specific to the technology:

.....

.....

7. In the working area the following fire extinguishing equipment will be used

.....

.....

8. Works with an open flame will not be executed in wind weather conditions……..……..

.....

9. Works will be supervised by Ms/Mrs ……

10. The head of the public/private voluntary service for emergency situations is informed of the start, interruption and completion of the work…….....

11. The fire defence measures control is monitored by Ms/Mr .....

12. The supervision of the work with fire is ensured by Ms/Mr .....

13. The fire situation or any other event is announced at ……, by …….....

14. Other specific fire defence measures.....

…….....

.....

15. The execution, control and monitoring staff was trained on the measures for the defence against fire……..…

.....

.....

Responsible	**Surname and name**	**Signature**
Issuer		
Head of the sector in which works are executed		
Persons executing the works with fire		
The private/public voluntary service for emergency situations		

Annex 16 – Access Rules

Unauthorized access on site is not allowed. Authorized visitors may enter the site only accompanied by a person belonging to the management of the site. The perimeter of the site will be enclosed and entry is possible only through the main gate on the basis on identification documents. After registration in the guard register the visitor will receive a nametag reading `visitor` and protective equipment which is composed of:

- shoes or boots with the non-slip sole;
- safety helmet;
- cloak or gown;
- protective goggles;

and will be trained in relation to risks of accident on site and to the modality to prevent accidents. Training will be registered in the guard register.
At the gate, in the office of the project manager or in any other similar location there will be 5 complete pieces of equipment (EIP), large numbers, for visitors.

For efficiency at the gate there will be a table listing the persons who have access on site. The porter will allow them access only with the appropriate protective equipment.

Annex 17 - Emergency phones

No.	Surname and name	Position/Institution	Phone Number
1.		Emergency Call	112
2.		The Giurgiu Territorial Labour Inspectorate	0246/216789
3.		The Giurgiu Inspectorate for Emergency Situations	0246/215150
4.		The Giurgiu Environmental Guard	0246/217702
5.		The Teleorman Territorial Labour Inspectorate	0247/311175
6.		The Teleorman Inspectorate for Emergency Situations	0247/311113
7.		The Teleorman Environmental Guard	0247/421067
8.		The Dâmbovița Territorial Labour Inspectorate	0245/211748
9.		The Dâmbovița Inspectorate for Emergency Situations	0245/611212
10.		The Dâmbovița Environmental Guard	0345/401011
11.		The Argeș Territorial Labour Inspectorate	0248/223408
12.		The Argeș Inspectorate for Emergency Situations	0248/217400
13.		The Argeș Environmental Guard	0248/213049
14.		The Olt Territorial Labour Inspectorate	0249/439283
15.		The Olt Inspectorate for Emergency Situations	0249/432211
16.		The Olt Environmental Guard	0249/438094
17.		The Vâlcea Territorial Labour Inspectorate	0350/407966
18.		The Vâlcea Inspectorate for Emergency Situations	0250/748201
19.		The Vâlcea Environmental Guard	0250/733492
20.		The Gorj Territorial Labour Inspectorate	0253/237933

21.		The Gorj Inspectorate for Emergency Situations	0253/211212
22.		The Gorj Environmental Guard	0253/221651
23.		The Hunedoara Territorial Labour Inspectorate	0254/213416
24.		The Hunedoara Inspectorate for Emergency Situations	0254/214220
25.		The Hunedoara Environmental Guard	0254/219790
26.		The Caraș Severin Territorial Labour Inspectorate	0255/213504
27.		The Caraș Severin Inspectorate for Emergency Situations	0255/511212
28.		The Caraș Severin Environmental Guard	0255/226730
29.		The Timiș Territorial Labour Inspectorate	0256/407959
30.		The Timiș Inspectorate for Emergency Situations	0256/493649
31.		The Timiș Environmental Guard	0256/427921

Annex 18 - Remote identification of workers by units

Unit _____

Address _____

Surname and name of the person responsible for the site works _____

Position within the unit_____

Mobile phone _____

Surname and name of the OHS worker _____

Mobile phone _____

Comments _____

The logo of our unit is

General Contractor

It is applied:

On the chest:

- ☐ To the left
- ☐ To the right
- ☐ In the middle

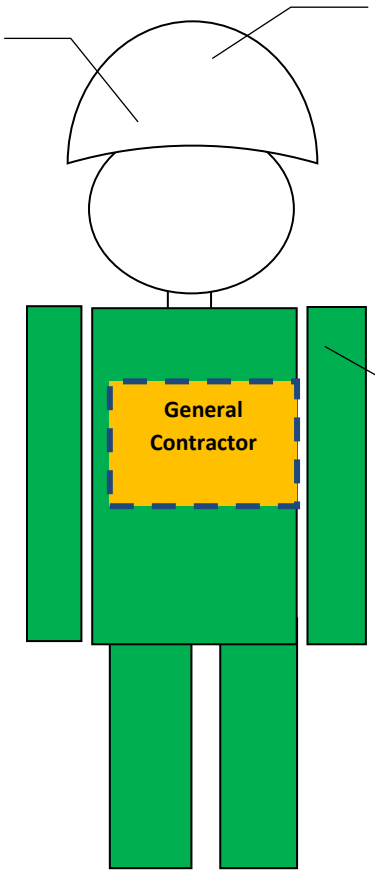
On the back:

- ☐ To the left
- ☐ To the right
- ☐ In the middle

On the sleeve:

- ☐ To the left
- ☐ To the right
- ☐ In the middle

Comments: The logo is applied in a blue rectangle shape on a yellow background



The color of the headphones worn by our workers is

WHITE

Comments_____
_____

The color of the personal protective equipment worn by our workers is

(Green)

Comments

_____
_____

THE HANDOVER – RECEIPT REPORT

OF THE OCCUPATIONAL HEALTH AND SAFETY PLAN

drawn up in

THE PROJECT PREPARATION PHASE

PT no 1062/2015

Concluded today, …….. ……. , at the handover – receipt of the Occupational Health and Safety Plan prepared by ASPIE within the S.N.T.G.N. Transgaz SA Medias Design and Research Division for project: PT No 1062/2015 `The Development of the Romanian Gas Transmission System along Bulgaria – Romania – Hungary – Austria Route` Lot 4 Pipeline Automation and Securing, project leader engineer Vasile Oltean.

I handed over,	I received,
OHS Coordinator - project preparation phase	OHS Coordinator - the execution phase
Eng. Octavian Cozma	

Annex 19 - THE COORDINATION REGISTER

SOCIETATEA NAȚIONALĂ DE TRANSPORT
GAZE NATURALE "TRANSGAZ" SA MEDIAŞ
Capital social: 117 738 440,00 LEI
ORC: J32/301/2000; C.I.F.: RO13068733
P-ța C. I. Motaş nr. 1, cod: 551130, Mediaş, Jud. Sibiu
Tel.: 0040 269 803333, 803334; Fax: 0040 269 839029
http://www.transgaz.ro; E-mail: cabinet@transgaz.ro

TRANSGAZ
MAGISTRALA ENERGIEI

THE DESIGN AND RESEARCH DIVISION

THE COORDINATION REGISTER
under

THE OCCUPATIONAL HEALTH AND SAFETY PLAN

PT no 1062/2015

compliant with RGR 300/2006 on the minimum health and safety requirements for the temporary or mobile sites

the project preparation phase

The Development of the Romanian Gas Transmission System along Bulgaria – Romania – Hungary – Austria Route` Lot 4 – Pipeline Automation and Securing

2016

THE NATIONAL GAS TRANSMISSION COMPANY TRANSGAZ SA Medias
THE DESIGN AND RESEARCH DIVISION

THE COORDINATION REGISTER
under
THE OCCUPATIONAL HEALTH AND SAFETY PLAN
PT no 1062/2015

compliant with RGR 300/2006 on the minimum health and safety requirements for the temporary or mobile sites

the project preparation phase

Code -
(Site code)

For the project:

`The Development of the Romanian Gas Transmission System along Bulgaria – Romania – Hungary – Austria Route` Lot 4 – Pipeline Automation and Securing

2016

Site: `The Development of the Romanian Gas Transmission System along Bulgaria – Romania – Hungary – Austria Route` Lot 4 Pipeline Automation and Securing
Address:
General Contractor: …….
2016

1. General information

1. Site name: The Development of the Romanian Gas Transmission System along Bulgaria – Romania – Hungary – Austria Route` Lot 4 – Pipeline Automation and Securing
2. The exact site address: The pipeline is located on the territory of the Giurgiu, Teleorman, Dâmbovița, Argeș, Olt, Vâlcea, Gorj, Hunedoara, Caraș Severin, Timiș counties.
   Special attention is given to the works which will be carried out at the Jupa, Bibesti and Podisor GMS.
   For this lot the pipeline is considered located between Podisor and Recas.
3. The name of the beneficiary: SNTGN Transgaz SA Medias;
4. Type of works: construction - mounting; execution of power and automation installations;
5. The project manager:
6. The health and safety coordinator during the project preparation: Octavian Cozma;
7. The health and safety coordinator during the project execution:
8. Work start date: 2017
9. Planned duration of site works: 882 days;
10. The maximum site workers estimated number: 100;
11. Number of independent subcontractors/contractors on site: 16

A. Contractor and subcontractor names and addresses and date of intervention on site.

No.	Last name/First name Contractor address	Date of intervention on site
	Subcontractors:	

B. The list of site workers and duration established for the execution of the works.

Date	Subcontractor Name	Job	No. of persons	Duration established for the execution of the works

C. Important events which must be taken into account in carrying out the project and works, the findings and the decisions taken.

Date	Work stages	Findings of the coordinator	Comments and proposals of the OHS coordinator	Decisions taken

D. Comments, information and proposals regarding occupational health and safety acknowledged to the beneficiary, project manager the persons intervening on site and their comments.

Date	Comments, information and proposals regarding the OHS	Acknowledged to Last name/First name/Position	Answers/Measures

E. Comments and proposals of the contractors subcontractors regarding occupational health and safety.

Date	Comments and proposals of the contractors/subcontractors	Acknowledged to Last name/First name/Position	Answers/Measures

F. Deviations from the provisions of the health and safety plan.

Date	Deviations	Acknowledged to Last name/First name/Position	Answers/Measures

G. Site check visit and meeting reports, orders to be transmitted.

Date	Site check visit reports	Trainings/Orders acknowledged	Last name/First name/Position	Answers/Measures

H. Incidents and accidents occurred.

Date	Incident/Accident	Causes	Measures to avoid them

THE HANDOVER – RECEIPT REPORT OF THE COORDINATION REGISTER

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THE PROJECT PREPARATION PHASE

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I handed over,	I received,
OHS Coordinator - project preparation phase	OHS Coordinator - the execution phase
Eng. Octavian Cozma	

Annex 20 - Subsequent intervention file - template

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TRANSGAZ
MAGISTRALA ENERGIEI

THE DESIGN AND RESEARCH DIVISION

SUBSEQUENT INTERVENTION FILE

under

THE OCCUPATIONAL HEALTH AND SAFETY PLAN

PT no 1062/2015

compliant with RGR 300/2006 on the minimum health and safety requirements for the temporary or mobile sites

the project preparation phase

The Development of the Romanian Gas Transmission System along Bulgaria – Romania – Hungary – Austria Route` Lot 4 Pipeline Automation and Securing

2016

THE NATIONAL GAS TRANSMISSION COMPANY TRANSGAZ SA Medias
THE DESIGN AND RESEARCH DIVISION

SUBSEQUENT INTERVENTION FILE

under

THE OCCUPATIONAL HEALTH AND SAFETY PLAN

PT no 1062/2015

compliant with RGR 300/2006 on the minimum health and safety requirements for the temporary or mobile sites

the project preparation phase

Code -
(Site code)

For the project:

`The Development of the Romanian Gas Transmission System along Bulgaria – Romania – Hungary – Austria Route` Lot 4 Pipeline Automation and Securing

2016

A) Documentation of subsequent intervention operations:

a. The technical project no. PT no. 1062/2015: `The Development of the Romanian Gas Transmission System along Bulgaria – Romania – Hungary – Austria Route` Lot 4 Pipeline Automation and Securing
b. Finding/collaboration reports.
c. Site order.
d. Reports, drawings, documentation on subsequent amendments.
e. The technical specifications.
f. The subsequent intervention sheet.
g. The OHS Plan.
h. The subsequent intervention file.
i. Specific work instruction.

B) Provisions and useful information for the carrying out of the subsequent interventions compliant with the occupational health and safety provisions.

a. Establishing of the detailed intervention plan compliant with the occupational health and safety provisions;

1. Manual and/or motorized excavation for pipeline intervention
2. Earth filling-in
3. Site restoration
4. Repairing of electrical wires interrupted;
5. Switch board repairing;
6. Restoring the electrical connections to the equipment;
7. Intervention at work programmes

b. Establishing the staff and the responsibilities.
   i. ……
   ii. ……
   iii. …….
   iv. ……

c. Establishing the OHS coordinator

d. Intervention staff training regarding compliance with the OHS rules and instructions

   i. General OHS rules
   ii. Particular OHS instructions

e. The drawing up of the work permits.
   i. Work permits
   ii. Hot work permits

f. The intervention sheet.

THE INTERVENTION SHEET

Example

1. Event: cracks in the pipeline

No.	Action, operation, …..	Intervention staff	Means of intervention	Standard	Comments
0	1	2	3	4	5
1	Interruption of gas on the section …….	Distribution station operator	Taps …….	Ipssm no …., Article ……	
2	Transportation of people and material at the intervention site	Driver	Vehicle ……..to	Ipssm no …., Article ……	
		Driver	Bus	Ipssm no …., Article ……	
3	Excavation…..	Excavator	Excavator	Ipssm no …., Article ……	
4	……	Labourer	Bank protection system, shovel, spade, pick	Ipssm no …., Article ……	
5	Cut	Antiex	The antiex cutting machine	Ipssm no …., Article ……	
	Electrical cable repair	Electrician	The device….	Ipssm no …., Article ……	
6	Inspection	Responsible for work	…..		
		OHS responsible			
etc	etc	etc	etc	etc	

2. Event: switchboard repair

No.	Action, operation, …..	Intervention staff	Means of intervention	Standard	Comments
0	1	2	3	4	5
1	Detection of switchboard shortcircuit	Electrician	General switch power supply interruption	Ipssm no …., Article ……	
etc	etc	etc	etc	etc	etc

THE HANDOVER – RECEIPT REPORT OF THE SUBSEQUENT INTERVENTION FILE

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THE OCCUPATIONAL HEALTH AND SAFETY PLAN

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I handed over,	I received,
OHS Coordinator - project preparation phase	OHS Coordinator - the execution phase
Eng. Octavian Cozma	

ANNEX 1A – List of commitments and monitoring activities

ANNEX 1a – List of commitments and monitoring competences								
No.	**Ref**	**Where**	**Objective**	**Action**	**Resp monitor**	**Owner (C/T)**	**Explanation**	**Origin**
1	296	All	Organisation	Contractors will designate one or more persons responsible for the management of occupational health and safety issues, environment and where appropriate - for site waste management site.	HSSE COORDINATOR C/T	C	Assigning responsibilities on the management of occupational health and safety issues, environment and where appropriate - for site waste management site.	2
2	398	All	Organisation	All crews will be provided with environmental awareness training.	HSSE COORDINATOR/MEDIU C/T	C/T	Direct mortality of notable species	2
3	1	All	overall	Comply with all mitigation measures included in the Environmental Agreement	CPU	C		1

4	287	All		For the pre-construction stage when work sites will be in place for each sector there will be a protocol that will establish as accurately as possible the environmental load, based on standardized forms (standard-forms), with aerial photographs or photographic images taken from the ground, which will act as control elements. For each site during the growing season (May-September the ecological structure and functions of the site will be accurately determined.	T		The correct assessment of all environmental costs (in full, including and control of emissions and possible safeguards for neighborhoods – phonic protection or dust reduction, sprinklers, insulation, waste management, rehabilitation of the site, etc.) starting from the tendering phase. This involves visiting the location of the site and a proper technical assessment of the situation.	2

5	87	All		The equipment shall be brought to the site in perfect state of operation, the technical revisions and oil exchange being already made	resp hsse + TECHNICAL SUPERV. T/C	C	Waste Management Plan	4
6	31	All		Monitoring the meteorological bulletins meant to take the equipment outside the areas which could be flooded, in case of high waters	SITE SUPERV	C	ALL PLANS	4
7	224	landslides		Impacts from rockfall and landslides will be mitigated by reducing potential for these incidents due to project induced earth movements, excavations or embankment through following GIIP for construction sites and implementing Health and Safety Management Plans and specific working activities instructions for geohazard areas. These will be included in a 'Geology Management Plan'.	TECHNICAL SUPERV T/C + HSSE RESP T/C	C	Risks reduction	3
8	324	Throughout		The workforce will be provided with environmental awareness training.	Resp. Mediu T/C	C		3
9	216	Entire Project		Training on community relations will be provided to workers during induction and regularly throughout their employment; workers will be informed on the code of conduct to keep according to local customs and on approach to be used when	HSSM COORD C/T + STAKEHOLDERS DEPARTAMENT OF BRUA	C		3

				interacting with local communities and individuals;				
10	3	Protected areas within the site		Picketing BRUA route in order to define the working corridorThe areas where the construction works are executed shall be marked with protection surrounding Where appropriate works corridors will be fenced (see specific mitigation).Prevent unauthorised or unintentional intrusion to protected areas through fencing or flagging	HSSM COORD C/T+SITE SUPERVISOR C/T	C		1
11	TMP02	Traffic and Transport Hazards	Transport	Develop and implement a Traffic and Transport Hazards Training Programme for all employees and contractors addressing transport to site and traffic within the working areas.	HSSM RESP C/T + SITE SUPERV C/T	C		3
12	TMP03	Traffic and Transport Hazards	Transport	Identify and install all necessary traffic warning signage within the working areas.	HSSM RESP C/T + SITE SUPERV C/T	C		4
13	TMP04	Driver Training	Driving	Prepare and deliver driver safety training for drivers and operators addressing both offensive and defensive driving skills. This will be mandatory for all Principal Contractor drivers working at the site.	HSSM RESP C/T	C		4
14	TMP09	Traffic	On-site Traffic Management	Prepare necessary reports, inspection logs and incident records.	HSSM SUPERV C/T+ MEDIU RESP C/T	C		4

15	TMP10	Traffic	On-site Traffic Management	Investigate all incidents and identify any necessary corrective actions.	HSSM SUPERV C/T+ MEDIU RESP C/T	C		4
16	TMP12	Traffic	On-site Traffic Management	Cover all dump truck loads with tarpaulins to minimise dust.	SITE SUPERV C/T + MEDIU RESP C/T + HSSM RESP C/T	C		3
17	TMP 14	Road Safety	Vehicle Inspections	Vehicles will be maintained in accordance with manufacturer guidelines and Romanian licensing requirements and periodic verification inspections will be undertaken.	SITE SUPERV C/T+HSSM SUPERV C/T + MEDIU RESP C/T	C/T		4
18	TMP 15	Road Safety	Fit for Work	All drivers must be fit for work. Employees must not drive after consuming alcoholic beverages and illegal drugs. The Project and site limit is 0.00% BAC. Supervisors and drivers must ensure that drivers are not fatigued when operating a vehicle.	SITE SUPERV C/T+HSSM SUPERV C/T	C/T		3
19	35	Throughout		The storage and operation under safety conditions of dangerous materials	HSSM SUPERV C/T+ MEDIU RESP C/T	C		1
20	25	Throughout		Hazrdoud materials should be labelled with the appropriate internationally recognised diamond shaped hazard symbol	HSSM SUPERV C/T+ MEDIU RESP C/T	C		1
21	75	Throughout		In case of using penetrating radiations (radiography) as method for the non-destructive control of the pipes welding, their level is low, being classified within admitted limits, and no additional protection measures	HSSM SUPERV C/T + TECHNICAL SUPERVISION	C/OUTSOURCING		3

				being required, except for the ones taken by the specialized laboratory. The owner of the laboratory shall have according to the contract the obligation to manage the radioactive sources according to the legislation in the nuclear activity field				
22	85	Throughout		The acquisition of chemicals for which the supplier may provide the proof of their pre-registration with the European Chemicals Agency shall be pursued	MEDIU RESP C/T	C		3
23	6	Throughout		Reducing exposure times for people working near noisy machinery	HSSM SUPERV C/T+ MEDIU RESP C/T	C		4
24	7	Throughout		Provide workers with appropriate hearing protection	HSSM SUPERV C/T + SITE SUPERV C/T	C		4

25	249	Hazard: Materials handling generating vibration (allowable hours) Notes on hazard: Damage or Nuisance caused by the level of generated Vibration specifically with regard to: • Hammering through hard rock areas • Horizontal drilling • Creation of cofferdams by sheet piling Potential consequences: Damage to buildings and structures Toppling or dislodging of stacked materials in nearby		Careful consideration of material placement and handling; No dropping of material from uncontrolled heights; Appropriate training with regard to material handling and operational techniques so as to minimise vibration generation; Control of vibration introduced into site induction to ensure that all operators on site are working in such a way to minimise vibration; and, Appropriate complaint procedure to ensure complaints are logged, investigated and resolved.	HSSM RESP C/T	C		4

		industrial facilities Negative effects on adjacent processes Perceptibility of vibration at High Sensitivity Receptors						

26	WM 015	All	2-Waste Storage	Each category of hazardous waste will be stored separately, based on physical and chemical characteristics, and depending on compatibility and nature of extinguishing substances which may be used for each category in case of fire;Any containers used for the collection and storage of hazardous wastes must be compatible with the waste they contain and will be kept safe and sealed, properly marked and labelled or accompanied by specific documents according to the regulations on hazardous waste. Such containers shall be inspected periodically to ensure their tightness and that they are kept safe. Containers should not be stored on the roads, traffic, pedestrian or any point that could affect emergency exits;	MEDIU RESP C/T+HSSM OBSERV C/T	C		1
27	HM 001	All	Material assessment and selection	All hazardous materials will be evaluated in accordance with relevant regulatory requirements. Such assessments will be undertaken by a suitably qualified and experienced person and approved by the H&S and Training Manager.	MEDIU RESP C/T+HSSM COORD C/T	C		1
28	HM 002	Site organizations	Hazardous materials inventory	Material Safety Data Sheets (MSDSs) will be provided for all stored materials. These will be	MEDIU RESP C/T+HSSM COORD C/T	C		3

				available in the storage locations and principle points of use.				
29	HM 003	Site organizations	Storage procedures	Storage of fuel in tanks equipped with locking devices located on platform (capacity 110%) in safe designated areas, located away from watercourses, geological protection areas and drains	MEDIU RESP C/T+HSSM COORD C/T	C		3
30	HM 004	Site organizations	Storage procedures	Waste oils will not be stored in underground tanks s; storage tanks will be emptied and inspected regularly for any signs of cracks or holes. The findings of the inspection will be recorded; any cracks or holes will be repaired, and any repairs conducted will be recorded.	MEDIU RESP C/T+HSSM COORD C/T	C		1
31	HM 005	All	Storage procedures	Spill kits, protective equipment, and other necessary equipment will be available onsite, where hazardous materials are handed, to clean and mitigate spills.	MEDIU RESP C/T+HSSM COORD C/T	C		1
32	HM 006	Site organizations	Storage procedures	Appropriate first aid will be located close to hazardous material storage areas such as eye-wash, showers, and first aid kits.	MEDIU RESP C/T+HSSM COORD C/T	C		4
33	HM 007	All	Transport of hazardous materials	Hazardous materials will only be transported by operators licensed and/or approved for the specific material. The transport of hazardous substances used in various operations will be made only by vehicles authorized and	MEDIU RESP C/T+HSSM COORD C/T	C		1

				agreed to transport hazardous substances according to the requirements of the Government Decision No. 1175/2007 approving the Norms related to the activity of road transport of hazardous goods in Romania, vehicles which must hold a transport license for hazardous substances and an ADR certificate				
34	HM 008	Site organisations	Storage procedures	Use of dedicated fittings, pipes, and hoses specific to materials in tanks, and maintaining procedures to prevent addition of hazardous materials to incorrect tanks.	MEDIU RESP C/T+HSSM COORD C/T	C		3
35	HM 009	All	Transfer procedures	Use of transfer equipment that is compatible and suitable for the characteristics of the materials transferred and designed to ensure safe transfer.	MEDIU RESP C/T+HSSM COORD C/T	C		3
36	HM 010	Site organisations	Transfer procedures	Transfer of hazardous materials from vehicle tanks to storage areas with surfaces sufficiently impervious to avoid loss to the environment and sloped to a collection or a containment structure not connected to municipal wastewater/stormwater collection system	MEDIU RESP C/T+HSSM COORD C/T	C		1
37	HM 011	All	Transfer procedures	Prepare written procedures for transfer operations that includes a checklist of measures to follow during filling operations and the	MEDIU RESP C/T+HSSM COORD C/T	C		3

				use of filling operators trained in these procedures				
38	HM 012	Site organisations	Storage procedures	Storage of incompatible materials (acids, bases, flammables, oxidizers, reactive chemicals) in separate areas, and with containment facilities separating material storage areas. The storage and use of hazardous substances will be done in conditions of maximum security, in order to avoid the possibility of their accidental spill	MEDIU RESP C/T+HSSM COORD C/T	C		4
39	HM 013	Site organisations	Storage procedures	Provision of material-specific storage for extremely hazardous or reactive materials	MEDIU RESP C/T+HSSM COORD C/T	C		4
40	HM 014	All	Storage procedures	Prohibition of all sources of ignition from areas near flammable storage tanks	MEDIU RESP C/T+HSSM COORD C/T	C		1
41	HM 015		Storage procedures	Storage of drummed hazardous materials in areas with impervious surfaces that are sloped or bermed that could retain any spills	MEDIU RESP C/T+HSSM COORD C/T	C		1
42	HM 016	All	Transfer procedures	Fueling of transport means will be done only in specially designated spaces inside the site organization and for machines from off site, the supply shall be done only in compliance with all environmental protection norms	MEDIU RESP C/T+HSSM COORD C/T	C		1
43	HM 017	All	Storage procedures	Containers and recipients with flammable and toxic materials will be permanently closed and covered. They shall be kept in	MEDIU RESP C/T+HSSM COORD C/T	C		1

				their original packaging and they shall be handled and transported under maximum security				
44	HM 018	Site organisations	Storage procedures	The diesel will be stored on the site organization, in tanks, and the supply of equipment will be done by fuel pump, while the supply of tank will be done by tankers whenever required	MEDIU RESP C/T+HSSM COORD C/T	C		4
45	HM 019	All	Emergency situation response	Strict compliance with own guidelines for safety and health at work and with the provisions of the Plan on emergency situation response	MEDIU RESP C/T+HSSM COORD C/T	C		4
46	HM 020	All	Accidental leaks	Accidental leaks of fuel or oil will be quickly collected and removed with absorbent material, collected in closed and labeled containers - temporarily stored in specially designed spaces until their delivery to an operator authorized for the collection / disposal of oil waste	MEDIU RESP C/T+HSSM COORD C/T	C		1