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# Extended HSE requirements for JMSR site and premises

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# 1. General requirements

Every contractor performing work on the premises of SSBR plant has to comply with the following sets of HSE rules:

- Extended HSE requirements for JMSR site and premises of MOL member companies (present document)
- HSE rules applicable on SSBR plant

The present HSE (Health protection, Safety Technology and Environment Protection) requirement system contains the appendices of all service procurement contracts (and procurement orders that do not require contracting). During the performance of such contracts, the contractor and/or its sub-contractors enter into the **JMSR**, including also the line-bound facilities, and perform various service activities.

The HSE requirements for JMSR site prescribes the requirements standardised for JMSR site for the contractors. During the performance of the service contract the Contractor shall fully comply with the provisions described in the contract and all its appendices, in addition to those specified in the effective laws.

The Contractor shall implement every action required for ensuring that all materials and processes applied or used during its activity will impose no danger, hazard or risk onto the health and safety of persons performing such activity or operation and staying within the radius of effect of the given operation, and onto the elements of the natural and built environment, and cannot cause any damage or harm to JMSR.

The Contractor accepts that it will be responsible for ensuring full compliance with the relevant laws governing the employment of both Hungarian and foreign employees. The Ordering Party will have the right but not the obligation for auditing the compliance with these regulations.

The Contractor will be responsible for ensuring that its employees holding foreign citizenship can always be in possession of the required documents. The Contractor will not be allowed to employ persons for the performance of the contract if such person fails to have a valid permit to work. The Contractor will have exclusive and full liability for the legal consequences arising from breaching this obligation and for the damage he caused in this context to the Ordering Party.

The contractor will be entitled to involve sub-contractors (performance agents) into the performance of its contractual obligations, but the maximum number of such parties can be three in case of project implementation.

Sub-contractors may be involved into the process only if reported in writing, with detailed explanation and reasons, and subject to the written approval of the Ordering Party.

The Contractor shall in the sub-contractor contracts validate the requirements defined in the appendices of the present contract, and prescribe to its sub-contractor to incorporate the present set of HSE requirements also into the sub-contractor contracts.

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The Contractor will be responsible for the performance of the lawfully contracted sub-contractor as for its own performance. If a sub-contractor is unlawfully contracted, then the Contractor will be responsible also for those damages which have occurred during the employment of the sub-contractor's services.

## **2. Pre-work HSE requirements**

To ensure efficient delivery of the relevant HSE requirements to the Contractor, JMSR contact officers may be contacted related to the performance of all service contracts. JMSR contact officers will provide opportunities for the contractor and/or its sub-contractor in clarifying the emerging HSE-related issues (e.g.: site hazards, comments to the HSE plan, interpretation of HSE regulations, etc.), or they will offer consultations for the professional contact officers specified by name in Contractor's contract, if and when required.

During the performance of the service contracts JMSR's responsible representative shall prior to starting the work inform the Contractor on hazards relevant to the given plant/site/technology, and in case of line-bound works on hazards relevant to the given routing in the following form:

- in case of works subject to HSE plan: by filling in the HSE plan hazard list and sending it to the Contractor
- in case of other works (not subject to HSE Plan): by filling in the permit to work hazard list.

### **HSE critical activities are as it follows:**

1. work that requires entry into confined space;
2. hot work;
3. lifting operations under extraordinary circumstances;
4. first opening of dangerous equipment, opening of technology system under pressure, emergency trans-loading operations – every activity, when dangerous material be released into open air;
5. clean-up of technology systems using chemicals, when filling in the data sheet of clean-up with chemicals is prescribed;
6. work at height or under water exposed to risk of falling or submerge, if there is no installed technical protection;
7. high pressure clean-up work;
8. parallel work performance by contractors, if they may expose danger onto each other's work at safety;
9. other work exposed to extraordinary risk or performed under extreme conditions (primarily earthworks, under foil tent or in plastic tunnel or in any other confined space or area, in inert atmosphere) subject to the operator's individual decision.

### **Dangerous area of work:**

Every work area, irrespective of the hazard category of the given area, where dangerous material may emerge or energy may be released in a level higher than the danger produced during the work or operation (e.g. primary opening of equipment that contain dangerous materials, opening the technology system under pressure, emergency trans-loading operations, and loading dangerous material in any non-

closed system – i.e. every activity, where dangerous materials might be released into the open air, etc.), or where dangerous materials are present in the environment (e.g. the installed or portable air analyser devices detect the presence of combustible or toxic gas in a quantity that requires intervention, and the impact zone of any already opened equipment that contains dangerous materials, etc.) in a level when the health, physical integrity and safety of persons who are staying within the within the impact zone of work might be exposed to danger or hazard unless they use/wear the relevant (personal or collective) protection equipment or clothes.

Based on the above (risk category of the working area and HSE criticality of the activity) the following table defines the risk levels for each activity:

<b>Complex risk category of the given work</b>	<i>HSE critical activity</i>	<i>Non-HSE critical activity</i>
<i>Dangerous area of work</i>	High risk	Medium risk
<i>Non-dangerous area of work</i>	Medium risk	Low risk

A HSE plan shall be prepared if

- two or more companies are simultaneously working on a high risk activity and
- the volume of the planned work will be higher than 120 man days

Prior to preparing the HSE plan or the safety and health protection plan, the Contractor (and sub-contractors) shall participate in the pre-work visit to the relevant JMSR technology or working area, and during this visit JMSR will provide the Contractor with all the information required for preparing these documents.

The Contractor's HSE plan will contain three main sections:

- *Contractor's data*, which shall be filled in by the main contractor(s) and provide information related to the main contractor and his sub-contractors, where the exact activity he will perform from the given assignment will be defined.
- A surface containing *hazards arising from the technology related to works*, and the Contractor shall fill-in this surface, presenting in details the sources of physical hazards and dangerous materials arising from the technology. JMSR will provide the relevant preliminary information during the preliminary site visit.
- *Detailed description of risks* is the responsibility of the main contractor, where he will define the potential risks and the method of protection in accordance with various steps of performing the activity (also considering the sequence of such steps). Protective and safety methods and tools to be used during such activities and methods and tools for preparations for emergency shall be specified using this surface. Steps of the work process shall be defined at a level of details that enables identification of the complete work process, the applied tools and protective equipment.

The **HSE plan** shall be prepared in the format specified later on by JMSR.

**In case of construction and implementation activity, a Safety and Health Protective Plan shall be prepared if**

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- the duration of the implementation activity will be foreseeably longer than 30 working days and more than 20 employees are simultaneously working at the same time,
  - the volume of the planned work will be higher than 500 man days or
  - several contractors are working at the same place of work and at the same time on the implementation of a given project (main contractor and its sub-contractors),

The plan shall be first prepared during the planning phase, and then it shall be updated during the implementation phase with the eventual changes. When the content is finalised, requirements specified in the relevant legal regulation (Joint Law Decree nr. 4/2002. (II.20.) SzCsM-EüM) and the following shall be taken into account:

- time schedule of work processes,
- harmonisation of simultaneous work performances, and their individual regulations,
- definition of activities that can be performed only consecutively,
- definition of protective equipment and protective actions,
- relevant regulations aiming at preventing entry of unauthorised persons.

**The Safety and Health Protection Coordinator (expert authorised for performing specialised work safety activity) shall prepare the above referred plan, to incorporate the required modifications and also he will be responsible for checking compliance with the plan during its implementation. The main contractor will be responsible for appointing and employing the coordinators.**

For high-risk and complexity works the main contractor shall ensure the presence of the safety coordinator throughout the duration of the work performance, (24/7) and this coordination will cover also the sub-contractor's work performance. The responsible technical manager shall record the coordinator person (i.e. key personal data) in the construction logbook. The coordinator's responsibilities will be qualified as special safety activity.

#### **Coordination of performance of parallel works**

If in a given area sub-contractors under the control of one given main contractor perform parallel work, then the main contractor shall coordinate these works. If in a given area several contractors perform parallel work, then the Ordering Party will appoint a person who will coordinate the parallel work.

Prior to the first entry at the area of work, the contractor's competent manager shall contact the TVK Industrial Site Security service and JMSR for holding consultations on actions related to safety (entry passes, using vehicles, transport of materials in and out, etc.).

The Contractor shall apply these criteria when implementing the technical content for the contract.

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### 3. Personal conditions

The employees of the contractor and/or its sub-contractors may enter for purposes of work performance into JMSR/MOL Group's sites and line-bound facilities only having successfully passed the valid **HSE training and exam**. JMSR/MOL Group has a three-level HSE training system:

- HSE basic training (for every contractors' employee)
- Operation or area-specific HSE training (for all contractors' employees, a concrete working area relevant training)
- HSE supervisor training (for employees identified in the permit to work as site supervisors).

Every contractor's employee (including also the supervisors) who intend to work at MOL/JMSR sites or premises should participate in basic HSE training and specific training for the given area and pass the relevant exam.

Every supervisor, who is recorded as supervisor on the permit to work and every employee who performs work alone shall participate in HSE supervisor training.

These training courses are not free-of-charge, and a fee shall be paid (except area-specific training not shown here), the relevant Contractors shall pay these fees and cost.

List, availability of training companies, training fees, training materials and presentations will be provided later on by MOL Group/JMSR.

The basic HSE training will be standardised on MOL Group level and valid for and acceptable in every site and valid for a given site. The area-specific HSE training will however be valid only in TVK Industrial Site, thus the contractor's employees who intend to work at MOL/JMSR sites or premises shall participate in area-specific training.

Each of the three training will be completed with an exam. After successful exam the HSE training will be registered in the so-called HSE Guideline, and the employee shall always keep this document with him.

The HSE training will be valid for one (1) year, and prior to its expiry date it shall be renewed.

The contractor's employees shall hold an **entry pass** valid for the given TVK Industrial site including JMSR site (except off-site work. The pre-condition for issuing such entry pass is the participation in the HSE training and the successful exam.

Work can be performed at MOL Group sites including JMSR site only in possession of the relevant documents entitling the holder for the given work, as it follows:

- document verifying the education/training background, qualification, exams, etc.
- document verifying the valid occupational-health fitness for duty
- specific fire protective exam (for occupations and activities specified in the relevant regulations)

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- mining safety exam (in areas supervised by mining authority – every site of Exploration-Production, Logistics pipeline and road transportation and LPG sites –, when the activity also affects the technology)
  - entry pass with photograph (where the entry system has been installed)
  - hand-over/take-over protocol of the area of work (if it was handed over),
  - the approved HSE plan (if required by internal regulations of MOL subsidiaries),
  - HSE booklet
  - list of working tools and instruments, periodical audit protocols
  - safety data sheets of the applied chemical materials
  - periodical audit protocols of load lifting equipments, binding elements and machines
  - appointments of first aid providers, the document verifying their training
  - work order
  - “appointment” issued by the company in writing for the given work performance
  - permit to work.

The contractor shall continuously check and ensure that his own and his sub-contractors' employees show up and perform work in a status enabling them to work (i.e. not under the effect of medicines, drugs, alcohol, etc.).

Any construction or implementation activity can be performed under the supervision of a responsible technical manager registered in the list of experts prescribed by Governmental Law Decree nr. 191/2009. (IX. 15.) (skilled workers holding qualification for the given type of construction or implementation work is entitled to perform construction or implementation activity also without the supervision of the responsible technical manager, if no other sub-contractor is required for the work). The responsible technical manager shall continuously be available at the site and ensure his availability through a mobile telephone. If he is prevented in performing his duties, he shall appoint a person with the required competences and experiences, and this shall be confirmed by recording the appointment into the construction logbook, and JMSR contact officer shall be also informed.

The contractor shall select and appoint a so-called **work supervisor** for each area and work group.

The person so appointed for supervision of work at the site shall meet the following requirements, in addition to the general employment criteria:

- he is professionally capable of supervising and controlling several persons,
- he is aware of hazards and sources of hazards typical in the given work environment,
- he can fully meet all health protection, safety and environmental protection requirements prescribed for the given work.
- he has participated in the safety training prescribed by JMSR/MOL and successfully passed the exam.

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The supervisor's main responsibilities and obligations:

- to maintain contact with JMSR contact officer during the implementation works
- to coordinate the performance of the daily implementation works
- to control and manage the activity of the working team
- **shall always wear a good-visibility red armband** during every work performance
- to cooperate in the permit to work process, to propose for issuing and/or modifying the permit to work, to give back the permit to work when the employee leaves the area of work and he has finished the work at his earliest, and to lock up this document when the work is finished.
- to conduct a site audit prior to starting the work, and then to give permit to start the relevant work that causes no danger to health and its performance is regarded as safe
- to audit the site and to take action (if required) in order to ensure compliance with the requirements specified in the HSE Plan
- to hold regular audits before and after starting the works to check and ensure that all personal and objective conditions and requirements specified in the permit to work are complied with
- to continuously check the proper housekeeping and physical order in the area of work, and to maintain this status during the entire work performance process, and to give back the area of work after the work has been finished in a perfect status regarding safety, fire and environmental protection
- if the supervisor temporarily leaves the area of work, to appoint a qualified and suitable person as his representative or substitute for supervising the work and to inform the relevant employees on this appointment
- the supervisor is allowed to perform actual work only if he is still able to monitor and watch the employees under his supervision and to safely follow any changes that might cause hazards and events, and to take actions in time for evacuating the area exposed to danger or for eliminating the relevant event of hazard
- to take actions in order that employees performing work at in the area can expose no danger or hazard through their works to each other
- when the validity of the permit to work is to be extended, to check any eventual change that might have occurred among the employees engaged in the relevant work and the conditions of such work
- in case of works involving entry into confined space, he may be assigned only with monitoring responsibilities, in addition to his supervisory duties
- if he identifies or detects any irregularity during the work performance, he shall immediately suspend the work and report the event to the operator's representative
- to report any and all HSE events to JMSR contact officer, and take action to ensure intact site (if this causes no danger), thus supporting the quick and efficient investigation of the event.
- to represent the contractor during the HSE audits held by JMSR.

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The supervisor shall be always staying and make himself available at the site. In case he is prevented to perform his duties as the supervisor, he shall appoint, in writing or verbally, another person with the required qualification, competences and experiences, who is also identified in the relevant permit to work. Such appointment related to the site supervisor shall be communicated to every employee working at the site. This appointment shall be also recorded into the construction logbook, and JMSR contact officer shall be also informed.

## **4. Objective conditions for work performance**

### ***4.1 Requirements to working and protective clothes and protective equipment***

The contractor shall provide protective clothes, shoes/boots and other protective equipment for its employees working at JMSR site and for the given working area and work processes assigned to the contractor in conformity with the degree of dangers or hazards in place in relevant work processes and conditions of work, but at least with the same protective capacity as the equipment used by employees working at JMSR site, and protective equipment for its employees with the protective capacity as required by the dangers and hazards arising from the contractor's own activity, as well as to ensure that such equipment are indeed used and applied. In case of contract that will be performed in several facilities of the site having different safety classifications or hazard categories, the clothes requirements in effect for the area or facility of the strictest classification or category shall prevail.

The following basic protective equipment s shall be worn and used in the **technology area** irrespective of the given activity:

- protective helmet (MSZ EN 397:2012, 2. protective category), supplemented with protective mask – if required (chemical and/or mechanical protection)
- eye protection: protective glasses minimum against flying particles (MSZ EN 166, 1. optical category, F. protective category),
- safety or protective shoes/boots, exclusively boots (with oil-resistant sole, toecap, anti-static, (MSZ EN ISO 20345:2012, S1 protective category). Wearing ordinary shoes is not allowed,
- Protective clothes, anti-static, flame-proof or flame retardant as required for the working area (MSZ EN 340:2004, MSZ EN ISO 11612:2009, MSZ EN 1149-5:2008. protective category).

The relevant permit to work may prescribe also other protective equipment for the activities and sources of hazard, but thus not taking over the employer's responsibility in this respect (the contractor will be responsible for selecting the type of the following protective equipment, in accordance with the risks existing at the working place):

- ear protection with the required protective capacity, ear plugs or ear muffs,
- protective gloves (in line with the harm or hazard),

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- respiratory protective equipment (as required: filter-type mask, or LSS – Life Support System, with compressed air supply or over-pressure type unit),
  - anti-fall protective equipment; safety harness and fixing rope, or anti-fall safety rope (ordinary belt is NOT acceptable!).

The contractor will be responsible for identifying and providing the supplementary protective equipment required for the given activity based on the relevant risk assessment, and also for ensuring that they are used.

The contractor shall continuously ensure compliance of the above described protective equipment with the laws and maintain their full-protection status, including repair or replacement in case of damage. These protective equipment shall be always available for checking their protective status at the working place.

## ***4.2 Compliance of working equipment***

The contractor may bring working equipment, tool and machines to the working area and technology area which are in perfect technical status and is accompanied with the prescribed operation manual, documentation, certificate, compliance document and commissioning document in accordance with its hazard category or control revision prepared in Hungarian language and specified in the relevant legal regulations, and all the required periodical revisions or inspections have been performed on these equipment.

In case of a non-dangerous working equipment the documents specified in Article 4 of Law Decree nr. **10/2016. (IV.5) NGM Decree**, whereas in case of dangerous working equipment, the documents verifying the revision specified in Article 4 of Law Decree nr. **5/1993. (XII. 26.) MüM** shall be available for audits held by JMSR.

In case of working equipment used for the works and subject to statutory periodical revision, the contractor shall verify the performance of the last periodical revision by displaying a signage or label (with good visibility) on the working equipment, or with other document (e.g.: lifting machine logbook, periodical revision protocols, etc.). Every working equipment and tool subject to statutory periodical revision shall have an individual identifier (ex-work number or inventory code).

## ***4.3 Requirements for the applied chemical materials***

When dangerous materials and preparations required for the contractor's activity are selected and applied, the hazards existing in these materials/preparations, and at the site of the activity, working area, technology area and their inter-actions shall be taken into consideration.

When activities are performed using dangerous materials and preparations, the contractor shall keep the safety data sheets of such dangerous materials and preparations at the site or in the vicinity of the work (e.g. within the site).

No materials/preparations with damaged or incomplete packaging and/or unidentifiable items will be allowed to bring into the site of the activity, working area, technology area.

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If a dangerous material might expose any load onto the environment, surface or underground waters, drainage network or airspace of the Operator or any third party, then the contractor shall inform the local operator's representative prior to starting the relevant operation. The given activity may begin only pursuant to the preliminary permit of the Ordering Party's representative.

#### **4.4 Requirements for vehicles**

Any third party-operated vehicle and working machine or equipment entering into the technology areas shall have the following;

For trucks:

up to 3,5 t permissible gross vehicle weight (GVW): 1 piece of 1 kg charge dry power fire extinguisher

up to 12 t permissible gross vehicle weight: 1 piece 6 kg charge dry power fire extinguisher,

up to 12-24 t permissible gross vehicle weight: 1 piece 12 kg charge dry power fire extinguisher,

higher than 24 t permissible gross vehicle weight: 2 pieces of 12 kg charge dry power fire extinguisher.

For auto buses:

up to 30 passenger capacity: 1 piece of 3 kg charge dry power fire extinguisher,

between 31-100 passenger capacity: 1 piece of 6 kg charge dry power fire extinguisher,

higher than 100 passenger capacity: 1 piece 12 kg charge, or 2 pieces of 6 kg charge dry power fire extinguishers.

For passenger cars: minimum 1 piece of 1 kg charge dry power fire extinguisher,

for mobile lifting machines: minimum 1 piece of 2 kg charge dry power fire extinguisher,

#### **4.5 Provision of protective equipment**

The contractor shall have the required number of gas concentration measuring instruments for detecting gases specified in the given permit (leased, or self-owned) subject to the working area and the activity. Only a qualified operator can be selected for operating the instrument, to be appointed by the company. The document certifying the periodical revision and the so-called bump test of the instrument prescribed by the manufacturer shall be available at the site.

If the presence or appearance of any material that may cause fire or is regarded as dangerous (harmful, toxic, etc.) in the work area or space cannot be excluded for sure or the work area or space has limited ventilation, then continuous gas concentration measurements shall be maintained throughout the entire work period, irrespective of the preliminary gas concentration measurement prior to issuing the permit to work, and this will be the responsibility of the contractor who performs the work in the given area or site.

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The following parameters shall be measured prior to issuing the permit to work, and also continuously during the work performance:

- Harmful and/or toxic vapours/gases;
- Combustible vapours/gases (ARH – Lower Explosion Limit);
- O<sub>2</sub> in case of works that require entry into confined space.

Continuous concentration measurements can be held using personal gas concentration measuring instruments or measuring instruments suitable for area monitoring. It is essential that the equipment can issue sound and light alarm signals indicating the hazard, when concentration rates reach the pre-set values. The measuring instrument should be calibrated and made in an explosion-proof version, and its so-called “Ex protection category” should meet the minimum requirements for Zone-1, application category II., the relevant gas sub-group (A,B,C), and it should belong to the appropriate temperature category (T1-T6) (II 2 G E Ex d/i/o/p/q IIA/B/C T1-6). *The contractor or the contractor company(ies) will be responsible for ensuring continuous concentration measuring instruments.*

In case of individual gas concentration measurements and if several employees work very close to each other, and safe monitoring of the work site can be secured using fewer equipment, then there is no need for providing separate equipment for every employee.

In case of work sites, where there is a hazard for employees to fall in or down, or persons staying in or near to the work site may be injured by falling objects, these employees should be protected by arranging collective protection, fencing off, barricading, covering the relevant area, or using other suitable method, or with individual protection.

The contractor shall provide the fire extinguishers and other fire-fighting equipment specified in the hot work permit, and inspected in conformity with the effective legal regulations that are suitable for killing the fire eventually emerging in the working area.

#### **4.6 Provision of social and first aid tools**

During his work at JMSR site or facilities the contractor shall ensure compliance with the minimum safety and health protection requirements specified for mining operations in Law Decree nr. 3/2002 (II. 8.) SzCsM-EüM when securing the work environment and conditions.

**If a site is qualified as a construction site then the minimum safety requirements for such sites specified in Law Decree nr. 4/2002. (II.20.) SzCsM-EüM shall be also followed.**

The contractor shall provide drinking water, protective drinks and other food or drink products in conformity with the type of work and the relevant weather, as well as cleaning and hygienic articles in conformity with the given activity and work.

In case of work performed in a technology area or outdoor and if the performance of work presumably requires a period longer than 2 days and minimum 10 persons will work at the same time, then the contractor shall secure a resting room (container) and minimum 1 mobile toilet in the working area. The number of such mobile toilet shall be increased after ever additional 5 persons. In case of main contractor assignment,

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where employees of several sub-contractors are working on the same working area and the total headcount of such persons is higher than the above mentioned 10 heads, then the contractor shall secure a resting room (container) and 1 mobile toilet.

The resting container shall be heated (during winter, if the daily mean temperature is lower than +4°C) and air conditioned (during summer, if the daily mean temperature is higher than +24 °C), and this size shall be in conformity with the total employee headcount.

If 10 or more persons are simultaneously working at the same working area from the same contractor for minimum 1 week, then the manager of the competent company shall secure a shower room (container). This shower facility shall have 1 wall-mounted basin after every 5 persons, and one shower after every 20 persons (with cold and warm water).

The Contractor will secure objective, personal and organisational conditions for first aid service at the workplace in conformity with the type and location of work, sources of danger and employees headcount.

When containers to be provided by the contractor are installed, the regulations specified in Point 6.3. of the appendix of the present contract shall be also taken into consideration.

## 5. Rules for area hand-over

Participants in the process:

- JMSR representative
- Main contractor's representative
- Contractors' representatives.

Hand-over of technology units, facilities, plant sections, storage tanks, complete plants, or construction works in vacant areas for purposes of turnaround and maintenance works to the contractors or maintenance workers will be performed prior to starting the work and after the preparation of the HSE plan and recorded in writing in a **working area hand-over/take-over protocol**. JMSR will prepare the protocol in minimum two (2) copies, and one (1) copy shall be given to the Contractor.

The area hand-over/take-over process shall be performed also between the JMSR and the Main Contractor, and the Main Contractor and the sub-contractor(s) mobilised for work at the working site, if the Main Contractor has the view that such area hand-over to the sub-contractor is necessary, but this can be implemented within one single process if, in addition to the main contractor's representatives, the sub-contractors' representatives are also present on the work area hand-over/take-over process.

The HSE regulations that permit to works cannot manage themselves will be recorded in the **working area hand-over protocol**. This type of work area hand-over/take-over process. Shall be conducted for the so-called 'greenfield' or 'brownfield' projects, where the permit to work process is also transferred, in addition to the working area. Specific HSE rules may apply onto greenfield or brownfield works (permit to work

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process, personal protective clothes requirements, etc.), but they will never be different to the legal regulatory requirements.

Every participant in the hand-over/take-over process shall sign the document and thus assume responsibility that its content is true and fair, and the participants accepted the content of the document.

If a working area is given back and taken back, this shall be recorded also in the same protocol.

The form for the area hand-over protocol will be prepared by JMSR later on.

## **6. Rules for using JMSR infrastructure**

### ***6.1 Connection onto energy networks***

The Ordering Party will define the technical solutions for the energy supply required by the contractor/sub-contractor (electric, steam, inert gas, fire water, etc.) and it will inform the contractor's contact officer.

The energy consuming equipment applied by the contractor shall comply with the requirements specified in the relevant laws and regulations.

An inspection protocol shall verify that the temporary electric energy networks can comply with the electricity safety requirements.

### ***6.2 A Rules for release into the drainage system***

If the contractor intends during its maintenance, reconstruction and project works to carry out an activity that may cause pollution to water and/or drainage system (e.g. equipment clean-up work), it shall report it in writing to and obtain the permit from JMSR contact officer.

In case of chemicals proposed for utilisation for the first time, the safety data sheet of such chemical, detailed description of the technology and the method of treatment of the produced waste material(s) shall be attached to the report.

The contractor shall be aware of the potential effects caused by the dangerous material used in itself and during the clean-up operations carried out in JMSR technology system onto people who work in the area. When dangerous materials are used, it shall be definitely reported (using the filled-in chemicals clean-up data sheet), and it shall be discussed with the JMSR.

If further investigation is required for releasing the given chemical material into the drainage system, then the contractor will pay all emerging cost.

### ***6.3 Installation of containers and regulations on smoking***

Installation of containers (rest room, storage, office, shower, toilet) to be installed by the contractor at JMSR site shall be reported in advance to JMSR's representative, and he shall analyse the case and issue the permit for installing containers.

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Indispensable pre-conditions for a successful audit and installation permit:

- the container shall be clearly identified (company name, manager's name and telephone number, container identifier),
- appropriate stability, integrity and locking capacity,
- physical, aesthetic, hygienic status adequate to the targeted use, acceptable status of windows and doors,
- container can be heated if required, documented compliance of the electric systems.

**The permit of the local supervisor shall be always obtained** for the container installation.

If the volume or technology of the given work requires the simultaneous installation of more than three booths or caravans/containers, and connection to electricity, heating steam, water, drainage network is required for their ordinary use, then an organisation plan shall be prepared on the place of installation clearly showing the exact position of the containers and the technology, and the point and routing of the said connection (electricity, steam, water, etc.). The relevant (main) contractor is responsible for preparing the organisation plan, and the manager of the relevant working are will approve this plan.

Smoking will be allowed only in areas specifically designated and marked by JMSR and in open smoking container approved by JMSR.

## 7. Appointment and permit to work

Pre-conditions for starting works at site:

- a written appointment issued for the employees of the contractor (as their employer) for performing the given work process
- HSE Plan (for HSE Critical activities)
- permit to work issued.
- In case of greenfield works, where the area hand over was executed to the Main Contractor, the permit to work process is transferred to the Main Contractor

The contractor shall prepare the **Appointment** prior to starting the work, and in case of HSE critical activities (or if the Ordering Party so requires) it shall have and hold the approved **HSE Plan**. In the possession of the said documents it may apply for the permit to work to the local representative of the given site. Form of every document will be pre-defined by JMSR, and they will be made available, including the fill-in instructions.

**The contractor's work supervisor may apply for the permit to work**, and he will be responsible for understanding the conditions specified in the permit to work, passing the relevant requirements onto subordinate employees, as well as ensuring compliance with the prescribed conditions and checking the continuous compliance.



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The standardised **permit to work** shall be applied onto:

- simple works (when there is no risk of potential fire or entry into confined space) („General work” cell),
- activities accompanied with sparking / risk to potential fire („Hot work” cell),
- works that require permit for entry into confined space („Confined space work” cell) and
- driving into the technology area by vehicles („drive-in with vehicles” cell)

The issuer of the permit will select the relevant permit type(s) among those shown on the permit to work that can best fit to the given work, based on the technical content of the work.

One single permit to work may contain only the same company's employees, thus in case several companies are performing work at the same time, the permit to works shall be prepared and issued separately for every company. Except the permit to work issued for entry into confined space, where employees of two companies may be included into the same permit if the watchman activity is performed by a third company's employee, i.e. not involved into the work performed in the confined space. The appointment document shall be required separately for every company.

Prior to issuing the permit to work the main contractor, the work supervisor and the issuer of the permit will jointly inspect the site of the work performance, where the issuer of the permit shall identify and evaluate the dangers and hazards related to work, and shall issue the permit to work in conformity with the results and findings.

If conditions for safe work can be defined by simply filling-in the permit to work form, then only the permit form shall be filled-in.

Whenever the contractor leaves the working area for whatever purpose he shall report it to the issuer of the permit to work. When the work is completed, the contractor shall obtain a closure for the permit to work by the issuer of the permit, and will acknowledge that by virtue of this action the permit will become invalid.

If during the period of work performance one or more employees recorded on the permit is/are transferred onto any other working area, then there is no need for applying for another permit or its modification, but this shall be also reported to person who issued the permit to work (staff member).

If during the work performance other employee(s) may join to those recorded on the permit, who are not shown on the original permit, then the supervisor shall apply for issuing a new permit.

The permit to work will become invalid in case of an *emergency alarm*. Then all activities under the permit shall be stopped and every person shall immediately leave the area in a safe manner following the rules for emergency evacuation, or lock up in the designated place until further instruction!

Identification of orders:

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**Every participant involved in the sub-contractors chain** shall record the **order number identifier** shown on the order onto the form titled „Work ordered by the employer at JMSR site” (briefly: Appointment), and to report with this form for the permit to work, in order to accelerate identification of contractors and the permit to work process, or if this is not available, the contract number for the given work, and he shall report for the permit to work with all these documents.

Please note that supplying incomplete or incorrect **employees data**, failure in performing the **sub-contractors’ reporting obligation** and missing **order number identifier** on the Appointment the operator reject or may reject issuing the permit to work.

## **8. HSE regulations for various activities**

### ***8.1 Activities as hot works or performed in environments exposed to fire and/or explosion (Zone 1-2)***

Hot work will mean an activity, where the local temperature may exceed the ignition temperature or flash point of combustible materials in place in the environment, or it is accompanied with open flame, and glow, sparks or cinders as a source of ignition.

We shall ensure the status for the working area and its environment where hot work can be safely performed.

The issuer of the permit will be responsible for the coordination of the clean-up works, moisturising, ensuring safe cover / barricade for trenches, removing all combustible materials (from the technology systems, trenches, etc.) in the area prior to issuing the permit. In cases if the issuer of the permit has no crew for this action, this responsibility may be delegated onto the contractor, and recorded in the permit to work. The contractor will be responsible for implementing the Operator’s instructions and to ensure the relevant conditions continuously during the works.

Performing hot work alone will be PROHIBITED!

Persons appointed for control / audit by both the contractor and the issuer of the permit shall comply and ensure compliance with the rules specified in the issued permit, and regularly follow and monitor the work performance and working conditions. In case the conditions specified in the permit to work may change, the work shall be stopped, and proposals shall be submitted for modifying the conditions laid down in the permit (if and as required), and a modified permit shall be issued.

Mobile telephone that is not explosion-proof and any other equipment that may be qualified as a source of ignition shall NOT be carried into or used in the explosive zone, except if the operator has issued in writing a permit to work (relevant to general work) prescribing continuous gas concentration measurement.

The following are typical examples for such eventuality (without the need for completeness):

- grass mowing using equipment operated by combustion engine;

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- transportation of materials into and from the site, loading with automotive vehicle;
  - non-explosion proof manual tool, other equipment, e.g.: use of drilling machine, illuminating equipment, photo camera, mobile telephone, etc.;
  - vibration test, RPM measurement, leakage test with infrared camera, thermography with infrared camera or non-contact temperature measurement, etc.

In case of operations performed in places exposed to fire hazard, and in environment exposed to fire and explosion (not including the works in confined space) and if the presence or appearance of combustible or other dangerous materials (harmful, toxic, etc.) cannot be excluded for sure, then in addition to conducting the preliminary gas concentration test prior to issuing the permit, **the contractor shall also implement continuous gas concentration tests.**

The following parameters shall be measured **prior to issuer of the permit, and then continuously (contractor)** during the work:

- harmful/toxic vapours/ gases
- oxygen (O<sub>2</sub>)
- Combustible vapours/gases (LEL);

If the hot work operation requires also entry into a confined space, then all the relevant safety requirements applicable onto this work shall be also fully complied with.

In the event harmful/toxic vapours/gases might be present or appear in the working area (space), then measuring their concentration and the method of protection shall be also defined in the permit to work.

If there are no harmful/toxic vapours/gases present in the working area (space) and their appearance can be excluded for sure, continuous measurement of the concentration of combustible vapours/gases only (LEL) will be acceptable.

If there are no harmful/toxic vapours/gases present in the working area (space) and their appearance can be excluded for sure (e.g.: office rooms and changing rooms not located in the technology zone, etc.), then the initial and continuous gas concentration measurement will not be a pre-condition for issuing the hot work permit.

If the contamination of the airspace remains lower than **LEL 20 % (in case of hot work lower than 5%)** and this level can no way become higher during the work performance process, the **hot work permit may be issued.**

If appearance of combustible vapours/gases or the enrichment of their concentration cannot be excluded for sure in the environment of a hot work performance, then their concentration **(LEL) shall be continuously measured throughout the work performance process**

If during the performance of hot work **the concentration of any combustible material exceeds LEL 20 % (in case of hot work in confined space 5%) in the work area, then every work shall be immediately stopped, every potential ignition source shall be eliminated and every person shall evacuate the area of contamination as soon as possible!**

Hot work may be continued only if the concentration of the combustible material drops below the limit value **and only in the possession of the prolonged or new hot work permit.**

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If during the work performance any material susceptible for auto-ignition / pyrophoric compound may emerge or is present, then they shall be permanently kept in wet or humid status in order that they can be checked and the chance for eventual warm-up or dehydration (causing danger or hazard) can be prevented, except the one which is banned to get contact with water pursuant to the safety data sheet (e.g. N-buthyllithium (NBL)).

If the presence or emergence of combustible and other dangerous, harmful, toxic materials can be excluded in the environment of hot work performance (e.g. no such material can get access into this area even from the adjacent facilities), and the work activity itself does not lead to the emergence of such combustible or hazardous materials, and further the ventilation of the area is efficient and not limited (e.g. greenfield project area), then the permanent gas concentration tests may be disregarded. The issuer of the permit to work shall decide in this issue, based on the relevant and actual circumstances prevailing in the area.

Every such material shall be stored separated or isolated from all other combustible materials and ensuring their wet status, in air-tight metallic drums or barrels, far away from environment exposed to fire and explosion.

In such less flammable situations less exposed to fire hazard, the issuer of the permit to work shall define the specific regular tests that are eventually required including their frequency on the hot work permit.

Only persons holding the prescribed specific qualification and the relevant fire protection exam, and who have participated in the proper fire protective training for the given hot work will be allowed to perform such hot work.

If a hot work permit is issued, **it will NOT mean that the general smoking prohibition in effect in the given area is no longer valid**, consequently smoking will be permitted only in the designated smoking areas.

During the performance of hot work, every electric equipment used for large metallic surfaces, where appearance of an alien potential might cause a danger of electric shock, can be supplied with power only through an isolation transformer.

In case of electric arc welding is performed simultaneously at several locations or work objects it should be ensured that no voltage difference specified in the relevant standard can emerge between surfaces that can be simultaneously touched, and the working places shall be arranged to have the same voltage potential.

## ***8.2 Safety rules for works in confined space***

Works that require entry into confined space can be performed only in possession of the relevant permit to work in confined space.

In accordance with MSZ-09-57.0033-1990 standard, every activity will qualify as work in **confined space**, which can be performed by leaning into or staying inside an equipment or machine, if this space was not designed for human stay, but it can meet each of the following conditions:

- The space is enough for minimum one employee entry and/or stay;
- The entry or exit opening (manhole) is narrow (limited entry/exit), i.e. the chance for escape.

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Confined spaces will be qualified as storage tank, trenches, drainage ducts, large diameter pipelines, smoke channels, technology equipment, devices (columns/towers, reactors, boilers, fire space of furnaces, etc.).

**Works** performed in places located **deeper than 1,2 meters** from ground level (pits, depressions, ditches, trenches, etc.) will qualify as works that require entry into confined space.

During the performance of work in confined space, every electric equipment used for large metallic surfaces where appearance of an alien potential might cause a danger of electric shock, can be supplied with power only through an isolation transformer. The end-point of such isolation transformer cannot be distributed among more power consumers.

If the presence or appearance of any fire hazard or other dangerous (harmful, toxic, etc.) material in the working area (space) cannot be excluded for sure, or the a workspace ventilation is limited, then continuous gas concentration measurement will be obligatory throughout the total period of work, irrespective of the preliminary gas concentration measurement performed prior to issuing the permit to work.

The following parameters shall be measured prior to issuing the permit, and then continuously during the work:

- harmful and/or toxic vapours/gases;
- Combustible vapours/gases (LEL);
- Oxygen (O<sub>2</sub>).

The instrument shall be able to deliver automatic alarm.

In case when several employees enter into the same confined space, not every such person shall have a personal gas detection device, and in this case the operator will define the number of such instruments in the permit to work. The contractor performing the work in confined space will be responsible for performing continuous atmosphere air test, and providing the personal air measuring instrument. If several employees work at the same time in the same place, the operator shall define the conditions for work, and the employer (company) shall provide the required equipment.

If harmful/toxic vapours/gases are or might be present in the working area (space), and their concentration might increase, the work irrespective of the oxygen concentration, **can be performed only in protective clothes ensuring full body protection and a self-contained closed circuit.** In this case continuous test of combustible vapours/gases (LEL) in the air will be sufficient, but it will be statutory under all circumstances.

Under the **full body protection clothes** (if the presence of dangerous material that can be absorbed through the skin can be disregarded) a closed anti-flame protective clothes shall be used providing protection against flame. A **self-contained closed circuit respiratory equipment** will mean a comprised air or fresh air supply equipment.

The use of full-body protective clothes and self-contained closed circuit respiratory equipment can be disregarded (but not the protective clothes) if the activity (e.g. audit) performed in a confined space can fully and completely establish the following:

- it was formerly fully cleaned out,

- presence of any dangerous material (combustible, harmful, toxic, etc.) can be excluded,
- neither can the activity itself lead to the appearance or generation of dangerous materials,
- the ventilation of the confined space is efficient and not limited, i.e. the oxygen concentration is continuously higher than minimum 19 v/v%.

**Continuous gas concentration measurement will be obligatory also in the said cases.** If conditions do not require a more rigorous solution, then every work team shall wear minimum one continuous gas concentration measuring instrument, or it shall be installed in the direct environment of work. This will in practice mean that minimum one-one continuous gas concentration measuring instrument shall be rendered to every confined space permit.

If during the work in a confined space the O<sub>2</sub> concentration might drop below 19 vol% (e.g.: using inert gases) or above 23 vol%, then the use the closed circuit respiratory apparatus will be obligatory, and using a filter-type gas mask will be PROHIBITED.

If works in confined space are performed in **inert gas atmosphere**, presence of inert gas shall be checked with continuous air test. If the prescribed inert gas atmosphere cannot be continuously ensured, no work can be permitted in such area (space).

Work in inert gas atmosphere will be allowed only if the employees concerned wear a dual safety respiratory system. The cylinder-supplied equipment prescribed in MSZ EN 12021:2000, and helmet with Life Support System can meet the relevant requirements, as it is equipped with a safety lock preventing opening by the user and an installed on-line communication system.

If work in a confined space is performed in an atmosphere, where the **oxygen concentration may be higher than the ordinary level (21 v/v%)**, then the air shall be continuously tested and the concentration shall be secured below 23 v/v% in order to prevent the high-level fire hazard.

If the **oxygen concentration is between 21 and 23 v/v%**, no hot work can be permitted fire hazard activity, and only explosion-proof electric devices and intrinsically safe (spark-free) tools can be used.

If the **oxygen concentration is higher than 23 v/v%**, any work can be permitted and performed only in accordance with the written operation instruction prepared and approved by every party involved into the work!

If the work is performed in an area (space), where appearance or enrichment of fire hazard materials cannot be excluded, then the **continuous measurement (LEL)** of such materials will be obligatory through the period of work and the following procedures shall be followed:

Confined space (confined space) work	Combustible material concentration in LEL %			
	0-5	5-10	10-20	above 20

<b>Permitted general work performance</b>	yes	yes	only test and clean-up work	no
<b>Permitted fire hazard activity</b>	yes	no	no	no

- **If the concentration of combustible material is lower than LEL 5 %**, and no further rise of this concentration during the work can be secured, then **fire hazard activity may be permitted** in the working area (space).
- If the continuous measurement shows any increase in concentration, and the concentration of combustible material **reaches 5% of LEL**, then **every fire hazard activity shall be immediately stopped!**
- **If the concentration of the combustible material in the working area (space) is higher than 5% of the LEL**, hot work or using tools causing the hazard of sparks **CANNOT be permitted**.
- **If the LEL value is between 5 % and 10 %**, only general work can be permitted, **between LEL 10 % and 20 % permit may be issued only for inspection/audit and clean-up works in confined space**, if these activities do not lead to or cause hot work, ignition or sparking.
- **If the LEL value is higher than 20 % NO work in confined space can be permitted in the confined space!**
- **If during a confined space work the concentration of any combustible material is higher than LEL 20 % in the working area (space)**, then every work shall be immediately stopped, and every potential source of ignition shall be eliminated and the polluted atmosphere shall be evacuated as soon as possible!

Any further work may be performed only after the concentration of combustible material drops below the above mentioned limit and ensuring compliance with the prescribed conditions, and in possession of a new permit.

In case of work in confined space, the contractor shall appoint and delegate, in addition to the persons actually performing the work, in the confined space, also **watchman person(s)** in number defined in the permit to work, who will be primarily responsible for providing security for the persons working in the confined space, and, if so required, for immediately rescue them. Watchmen cannot be assigned with any other work. Every watchman shall have protective equipment and protective clothes with at least the same protection capacity as those used in the confined space. If appearance of gas with dangerous concentration might probably occur also outside the given device, equipment and storage tank, minimum one instrument for continuous gas concentration measurement shall be ensured. The watchman persons shall ensure and maintain continuous contacts with the persons entering into confined space (e.g.: loud speech, signalling rope, wireless), and they shall be trained, competent, suitable and equipped for performing rescue operations.

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In case of work in confined space, the number of persons working in confined space and watchmen shall be specified in the relevant permit to work or in the HSE plan, in conformity with the following basic principles.

If an equipment (storage tank, trench, etc.) is polluted with HC material, the number of persons working in confined space cannot be higher than two (2) for each entry point (e.g.: manhole, trenches, ladder helping descend and ascend, etc.). The obligatory number of watchman staff (who cannot be assigned with any other duty or work other than watching and eventual rescue operation during the period of confined space work) will be minimum two (2) persons for one entry point (only points used for confined space entry shall be counted), and after every additional confined space point 1-1 head. Deviation from the above process might be permitted, subject to the hazards in the working area and activity, and being aware of the risk mitigating actions, but this shall be always recorded in the HSE plan that JMSR will preliminarily accept.

If the equipment (storage tank, trench, etc.) is free of hydrocarbon (isolated, cleaned up, steamed out, ventilated, etc.), then the number of entrants can be more than two (2) by each entry point. In this case the relevant HSE Plan, and then the permit to work will define the number of entrants. The statutory number of watchman (who cannot be assigned with any other responsibility but the watching and eventual rescue while the work in confined space is going on) for one entry point will be minimum two (2) (only persons assigned for the confined space work shall be counted), and 1-1 person after each confined space entry point.

Work in confined space inside equipment can be performed only by contractor (main or sub-contractor), which has for the entry into and work performed in confined space

- has the required expert staff (over 18 years of age, physically fit, authorised in writing),
- has the required headcount (staff) available (for work and watchman)
- has properly trained employees (regarding technology, first aid, etc.)
- has employees in health fitness for working in confined space, and regarding the technology and other risks,
- has all machines and working equipment in the required status (periodically inspected, in the required classification),
- has all the prescribed protective and safety equipment (considering the potential risks) and trained the employees for safely using these equipment.

Only those persons can be assigned for watchman, who have been trained for providing eventual rescue, are physically fit and have acquired the relevant first aid skills.

In case of work performed in confined space reliable communication shall be secured between the employees working in confined space and the watchmen (e.g.: verbal, signal rope, radio), but when selecting the relevant solution every circumstance shall be considered (distance, explosion-proof zones).

Persons watching other persons working in confined space shall always wear a **yellow armband**.

During the entire work process monitoring of persons working in confined space shall be continuously secured, and this will be implemented through collecting their entry passes or HSE booklets at the relevant entry points.

When work in confined space (inside an equipment) is planned efforts shall be taken to ensure that the temperature of the equipment is between 5 °C – 45 °C. **If this is not**



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**possible**, but temperature conditions can be secured using the appropriate additional safety actions (e.g.: technical – cooling or heating the air space in the relevant confined space, etc; organisational – extending the rest time, securing more frequent shift of crew, etc.), then these circumstances and additional rules and conditions of safe work shall be always recorded in the **HSE plan**, and a detailed operation procedure shall be also prepared, if required.

### ***8.3 Safety rules for works performed under foil tent, in plastic tunnel or any other confined space or area***

Every opened equipment, pipe and orifice **under foil tent, in plastic tunnel or delineated in any other way** within the work area shall be shut down using a blind, and every drain channel shall be covered preventing the chance for gas or vapour escape or release, and appropriate ventilation of the tent or plastic tunnel shall be also secured.

The technical supervisor of the work (main contractor or contractor) shall at least audit and document the following in the construction logbook regarding the foil tent or plastic tunnel installed for the work:

- general compliance (arrangement, stability, points of entry and escape),
- appropriate isolation of every dangerous external connection,
- appropriate ventilation (fresh air supply, temperature control, etc.).

Permanent gas concentration test will be always required, and employees shall be supplied with personal gas detector devices for measuring at least the HC and O<sub>2</sub> concentration in the air of the workplace (the issuer of the permit to work will define all other equipment for tests and measurements depending on the conditions of work).

If based on the relevant definition the place/space of work is not qualified as confined space, but the following criteria can be applied on the place/space, then work can be performed only with a work permit for entry into confined space ensuring compliance with the provisions specified above (in Point 2.):

- ventilation of the work space is limited, thus using a self-contained closed circuit respiratory equipment is prescribed, or
- escape opportunities are limited.

### ***8.4 Safety rules for works performed in inert atmosphere***

In ordinary cases entry will be forbidden into inert space.

If works in confined space are performed in inert gas atmosphere, presence of inert gas shall be checked with continuous air test in accordance with the work permit for entry into confined space. If the prescribed inert gas atmosphere cannot be continuously ensured, no work can be permitted in such area (space).

If the prescribed inert gas atmosphere cannot be permanently ensured, no work can be permitted in the given place/space.

Work in inert gas atmosphere will be allowed only if the employees concerned wear a dual safety respiratory system.

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The cylinder-supplied equipment prescribed in MSZ EN 12021:2000, and helmet with Life Support System can meet the relevant requirements, as it is equipped with a safety lock preventing opening by the user and an installed on-line communication system.

*Note: catalytic-type ordinary air analysis instruments cannot be used in inert space!*

Only employees who are qualified and medically fit for duty can perform this type of work in inert atmosphere.

Technical and safety technology rules for the work shall be clearly defined using a simple language, and these rules shall be strictly followed.

**ONLY PERSONS EQUIPPED WITH OVER-PRESSURE-TYPE RESPIRATORY PROTECTIVE EQUIPMENTS ARE ALLOWED ENTERING INTO CONFINED SPACE WITH INERT ATMOSPHERE.**

**When work is performed without entering into confined space**, the chance for presence or appearance of any neutral material (i.e. that may cause suffocation) shall be prevented!

### **8.5 Rules for lifting / hoisting operations**

During lifting operations carried out in facilities in JMSR using cranes, forklifts and other load hoisting equipment operated and installed by the contractors (tower, portal, mast, etc.), and similar but mobile (trucks, vehicles, caterpillar, etc.) units the relevant requirements specified in **47/1999. (VIII. 4) GM Lifting Machines Safety Regulation** as several times amended.

The operator of the lifting machine working in JMSR will be allowed to use for any and all operations only lifting machine and other load hoisting equipment which are equipped with the following:

- safety compliance certificate,
- commissioning permit (the operator will issue),
- in case of mobile lifting machines: installation procedures (plan),
- operation instruction in Hungarian language,
- loading diagram,
- operation manual (in Hungarian language)
- crane book (fork lift datasheet) (to be updated regularly),
- lifting machine logbook (to be updated regularly),
- periodical revisions:
  - pre-shift inspection (operator will document it in the lifting machine logbook)
  - structural inspection,
  - main inspection,
  - load test,
- periodical safety technology inspection (including inspection protocols with validity at least until the work completion date defined in the contract) certificate and test protocols, and their validity date until the completion date of the contracted work,
- the protocol verifying the regular technical maintenance and its results or valid operation permit

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- valid driver license.

The operator shall be able to present the above mentioned documents at request. The operator may exclusively employ persons appointed in writing for handling and operating the above mentioned machines and equipment in conformity with the relevant laws and regulations, and the operator shall be able to present these documents.

Prior to starting the lifting work the lifting machine operator **shall prepare a lifting plan** in the following cases:

- if he works in an area, where safe operating conditions of lifting machines working within each other's radius shall be prepared,
- several cranes are working at the same time for the lifting operation,
- if the lifting operation is performed in an environment of a public area (public roads, railway tracks),
- if the lifting machine is installed and operated in the vicinity of populated areas (residential buildings) – in this case the procedures of the owners, operators or managers of the facilities shall be also followed),
- in case of lifting operations, where persons are lifted (requirements specified in MSZ–04-93-1990 /D 86/ construction standards and 47/1999. (VIII. 4.) Law Decree shall be strictly complied with), the plan shall cover the entire work process,
- if the load to be lifted exceeds 65% of the nominal load capacity of the lifting machine (load capacity range for the crane boom),
- if the load to be lifted exceeds 50% of the nominal load capacity of the lifting machine, (load capacity range for the crane boom) and an eventual breakdown may jeopardise the existing facilities,
- if a lifting beam or column is applied for the given lifting operation,
- if the load is more than 15 ton, and this load is lifted above existing operational facilities,
- if the load is more than 1 ton and this load is lifted above or near to existing operational facilities,
- if people are working in the direct vicinity of the suspended load which is more than 1000 kg or assembly operations shall be performed under such load (fixing/anchoring/binding, welding),
- if lifting operations are performed in the vicinity of high and low voltage subsurface electricity overhead line,
- if the plant manager who secured the working area so request due to the technology processes going on in the area,
- in case of regularly repeated lifting work a so-called type-plan can be submitted (e.g. lifting an electric motor from the ground level).

In case of regularly repeated lifting work a so-called type-plan can be submitted (e.g. lifting from ground level using electric motor).

The lifting plan (lifting technology instruction) shall include:

- identifier of the applied lifting machine(s), crane(s),
- load capacity of cranes in various working positions,
- installation position of the cranes, in accordance with the scaled location drawing,
- the application method of the cranes (e.g. boom was left without support or not),
- the applied other load hoisting equipment,
- chronological sequence of the operations, movements and speed,
- total mass of the load and mass parts per each crane,

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- binding points and method of load fastening,
  - presentation of the load path (in space),
  - maximum permissible wind velocity,
  - hazards (e.g. soil conditions, electricity overhead lines),
  - dangerous areas and the required isolation and lock-out actions,
  - supplementary safety actions,
  - signals related to the operations and work (information), their methods and tools,
  - requirements relevant to persons involved into lifting operation, their responsibilities and tasks, and their exact positions during the work, supervisor of combined lifting operation,
  - identification of the operation area, barricade, signposts and orientation equipment.

In the event a lifting plan is required pursuant to the above rules, then prior to the lifting operation (installation) a copy of the lifting plan prepared in accordance with the relevant regulations and approved by the lifting machine officer identified by the Ordering Party and a copy of the technology instruction shall be submitted to JMSR contact officer.

The contractor shall inform the stakeholders on the content of the technology instruction and this shall be documented.

**The lifting operation shall be immediately stopped if the level of safety is decreasing, procedures or instructions are not clear enough, and the communication is interrupted.**

### ***8.6 Safety rules for works performed in dangerous places exposed to falling***

Places of work that are exposed to risk of falling down or objects may fall from above and hit employees and other persons inside the impact radius of work, shall be encircled using a fence, cover or any other suitable protection.

Individual risk prevention actions will be required, if the working tool is used at a high workplace where

- a) next to or below the place of work, irrespective of the difference in level, there is a material where the hazard of drowning exists;
- b) the working tool is supplied from a podium, scaffolding or elevation positioned higher than 1 m above the ground level;
- c) the place of work that can meet the safety and ergonomic conditions is positioned higher than 2 m above ground level el.

Fall of objects from height at construction sites shall be prevented by appropriately dimensioned and fixed cover, or 1 meter high, 3-line foot board with narrower than 0.3 m spacing, and rail, or any other solution that can provide protection with equivalent effect (e.g. safety net, or grid)

- a) if the height of work is above 2 m;
- b) if the place of work or the traffic road is above or next to water or any other material where the risk of drowning exists;
- c) when roofs, ceilings, slabs, ceiling lamps, cellars, shafts are opened or constructed;

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d) in case of works to be performed on roof higher than 2 m and on roads leading to such roof;

If there is a depth deeper than 1 m below the level of the passageway, then the passageway shall be equipped with a foot board with 1.0 m high dual-line railing.

In case of flat and low inclination roofs (less than 20°) this railing may be substituted with a warning limit installed 2 m from the edge of the working trench.

Approaching places or working in areas that are exposed to falling or objects falling from above might be dangerous and difficult, thus the following rules shall be followed:

- If and as conditions permit, work shall be always performed standing on a stable position (ground or fixed podium, etc.), where there is a minimum 1 m high safety railing for protecting the employee from falling,
- If there is no such podium available, the following options exist:
  - building a standardised scaffolding (standardised walking surface, 3-line safety railing), where the area of work can be approached and used for actual work and moving will be safe.
  - using anti-skid ladders fixed against accidental move for climbing to the place of work and performing simpler and short routine-type works (using simple and light tools, e.g. screwdriver) maximum up to 2 m height.
  - Using individual anti-fall protection equipments. When using individual protection, always full-body harness shall be used. Use of working belt as an anti-fall equipment is strictly prohibited. The method of fixing the equipment to the tie-down points shall be selected depending on the type of work. This may be the use of the anti-fall device with a so-called „Y” rope or fixing to a point above the employee or ropeway. When selecting the protection equipment the conditions of the given place shall be always considered (e.g.: if working with explosive zone only anti-static body harness and anti-fall equipment will be allowed.) The user shall always visually inspect the harness and the fixing point. If he detects any damage or deficiency, or he has any doubt regarding the reliability of the harness or the fixing point, then this harness shall not be used, and no work at height can begin until the relevant problems are remedied or corrected. Safety harness, fixing points and anti-fall protection systems shall be regularly inspected and this inspection shall be documented in conformity with the requirements specified by the relevant laws and operation manual.

Collective protection shall be preferred versus individual protection.

If there is a risk of falling down or objects falling from above, and work can be performed only if safety or protection elements (e.g. railing) are broken up or the employee needs to lean over such railing, then individual anti-fall protection equipment shall be used a.

When individual anti-fall equipment is used the fixing points with the required strength shall be selected preferably above the relevant employee.

When selecting the anti-fall equipment, the following aspects shall be considered:

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- height of the level of work and the fixing point versus ground level (or versus levels of structures located below the level of work) in order that the employee's fall can be stopped prior to hitting the ground and without his injury;
  - the braking force of the energy absorbing anti-fall equipment can be maximum 6 kN the user cannot be exposed to any force higher than this limit ();
  - each component shall be able to hold 1500 kg without causing damage, injury, rupture or permanent change;
  - the total length of the energy absorbing element of the anti-fall equipment cannot be longer than 2 meters (including also the connecting safety rope and connecting elements (carabiners), and only the energy absorbing element with one carabiner cannot be longer than 44 cm;

Work at height is qualified as critical activity, thus minimum 2 persons will be required. This is why there is also a rule, that the employee using the anti-fall system cannot remain in hanging position for longer than 15 minutes in order to avoid the emergence of an eventual trauma. The employee shall be medically fit for working at height and shall participate in safety training on using the protective equipment.

When working at height, all tools, spare parts and machines shall be placed (machines shall be fixed) so that they cannot fall down and expose additional risk onto people below. During such works at height traffic below shall be restricted or limited.

If machines or equipment are installed under the working level, it shall be protected against falling objects.

### **Use of ladders**

- Ladders may be used only for approaching the working level or short time works using simple and light tools (e.g. screw driver).
- Ladders may be climbed only facing the steps, and during climbing, descending or working the user shall maintain three contact points with the ladder (i.e. 2 feet and 1 hand or 2 hands 1 foot), and shall always remain in the middle of the ladder steps.
- While climbing the ladder the user cannot hold any object in hand, tools shall be kept in a bag or case in order that hands can remain free.
- While working, both feet shall rest on the same step.
- The maximum ascending height at ladder will be 2 meter (this shall be clearly marked on the ladder), if the user has no anti-fall protective equipment, and if his position is higher than 2 meter, then anti-fall protective equipment shall be used, but in this case the maximum permitted height is 6 meter.
- Ladders shall be positioned only on flat terrain and ladder steps shall be maintained on horizontal position, and the ladder shall be always secured against slipping or skidding.
- The ladder shall be minimum three steps (i.e. 1 m) higher than the terrain where the user is climbing up.
- Never exceed the maximum load capacity of the ladder.
- The ladder shall be secured against accidental skidding or falling during use.
- The user shall prior the use visually check the ladder. Special care shall be taken to hinges and safety stiffeners.

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### Requirements for ladders

- Plastic or metallic ladders shall be equipped with anti-skid steps. Metallic ladders shall be equipped with fixed rubber or plastic foot.
- Ladders made of wood cannot have protective paint cover, because this might hide the deficiencies in the wood.
- Only ladders made of non-conductive materials are allowed for use in electric control rooms.

### **8.7 Safety rules for building and using scaffoldings**

Scaffoldings shall be designed, prepared and maintained so that they cannot collapse or be dislocated. They shall be constructed exclusively using standardised elements.

Scaffolding for work, planks and scaffolding ladders shall be prepared so that they can prevent employees and other persons staying in the vicinity of the work fall and that they can secure protection against falling objects.

Law Decree nr. **4/2002. (II. 20.) SZCSM-EüM** specifies the general safety rules for scaffolding.

Every working level, ramp, passageway higher than 2 m shall be equipped with protective railing (minimum 1 m high 3-line protective railing (with upper and middle railing element and footpath).

Size, dimension, shape and structure of scaffolding:

- it shall meet the type of work,
- it shall have the planned load capacity (the maximum load capacity shall be displayed),
- it shall allow safety work performance and movement.

The person authorised for inspection (employee of the company that constructed the scaffolding) shall inspect the scaffolding and it shall be documented:

- prior to commissioning,
- in case of structural modification or de-commissioning,
- after unfavourable weather (storm, earthquake, etc.),
- after every accident or safety event that could have had effects onto its structural elements or stability,
- in case of a longer interruption in use (after 1 week the inspection shall be repeated and documented).

The exact time and results of the inspection shall be recorded in writing. The scaffolding can be commissioned only if its results are satisfactory and in accordance with the relevant permit.

During the periodical inspection the status of the eventually damaged scaffolding shall be secured with supplementary bracing, binding and fixing, and fastening the screws. The scaffolding can be used again only after completing the said actions.

The inspection shall cover the following:

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- compliance with the scaffolding plans,
  - durability and stability of the structural elements (e.g.: foundation, splicing, bracing, binding and fixing),
  - safety equipment (e.g.: ramp, railing, footboard, load capacity, other signage, fire protection, lighting protection, lights).

In addition to the documented inspections, daily audits shall be held prior to starting the work, and this will be the responsibility and obligation of the employees and the supervisor who directly controls the work.

A scaffolding plan shall be prepared for erecting the scaffolding, except buck scaffolding made of elements defined in the product standards, ladder scaffolding not higher than 20,0 m and made of metal designed and erected for a load capacity not higher the 2000 N/m<sup>2</sup>.

Scaffolding made of elements defined in the product standards can be erected based on a structural layout plan, ladder scaffolding not higher than 6,0 m and made of metal designed and erected for a load capacity not higher the 2000 N/m<sup>2</sup>.

If a plan is required for erecting the scaffolding, the party ordering the work shall supply the required data and prepare or order the plan.

Issuer of the permit (operator) required for works on installed scaffolding shall be always enabled to get access and look into the layout plan of or the structural layout plan the scaffolding and the written documentation of the preliminary inspection. Permit to work can be issued only the above are secured.

Mobile (rolling) scaffoldings shall be fastened prior to use against dislocation.

When mobile scaffolding is moved, the following shall be taken care of:

- during its moving, no person is allowed to stay on the scaffolding,
- its height shall be reduced to maximum 4 m,
- all electricity cables or lines or technology elements shall be checked along the planned routing and the need for a smooth surface shall be also considered.

The width of the floor of the scaffolding cannot be less than 0,6 m. The width of the floor shall be adjusted to the width of the scaffolding frame. The scaffolding shall be fastened using perpendicular stiffeners (cross braces).

Special ladders or stairs shall be used for approaching the scaffolding, and these shall be fixed against falling. No braces or stiffeners shall be used for approaching the working level on the scaffolding.

Minimum two (2) persons shall be secured for erecting the scaffolding.

Scaffolding construction or demolishing works can be performed only under the supervision of person who has the prescribed professional qualification (as specified by laws) and authority for action, and who is also responsible for ensuring compliance with the safety procedures. Every employee involved into the scaffolding work shall use the prescribed personal protective equipment and safety protection equipment, and the contractor shall provide these equipment and ensure that they are used and worn.



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Every organisation and person performing scaffolding work shall strive for high-quality and coordinated work through enhanced care and disciplined work organisation, irrespective whether the scaffolding is used for itself or others.

Every scaffolding construction work can begin only in possession of the valid "Permit to Work" issued by the area manager, and ensuring full and strict compliance with the relevant provisions.

Prior to constructing scaffoldings (pipe scaffolding, frame scaffolding) erected with elements specified by Hungarian product standards and elements of scaffoldings mentioned in the following sections, the contractor shall regularly inspect: compliance with standards; visual inspection and load capacity test of scaffolding planks, ladders, pipe clamps, other scaffolding elements and accessories, hanging or suspended scaffolding, rope ladders; periodical test and marking prescribed by standards, and only scaffolding erected from inspected elements (including their documentation in writing ) can be constructed. (to be specified in the contract).

In case the scaffolding is erected using modern pre-fabricated elements that are not included in the product standard (e.g. Layher, Krause, Plettac, Hünnebeck, etc.) it shall have an application document issued by the official certification organisation, and an operation instruction and construction technology description prepared by the manufacturer or distributor, (and translated onto Hungarian language). The contract shall oblige the relevant party to present this document.

Scaffolding, irrespective of size/dimension, can be used only after reception of **Scaffolding hand-over/take-over protocol** specifically prepared and introduced for this purpose.

The party constructing the scaffolding will be the delivering party, and party ordering the work will be the accepting party. The completion report of the scaffolding can be submitted only after the protocol is drawn up. If this protocol is missing, or the scaffolding is not in full compliance with the requirements, no work is permitted on this scaffolding!

If the contractor erects the scaffolding for its own purposes, the protocol shall be still drawn up. Performance can be verified only by attaching the duly signed protocol.

Employees using the scaffolding shall not change the scaffolding structure on their own initiative, and only the builder of the scaffolding will be entitled to do so!

If any employee has the opinion that the scaffolding present a source of danger, this shall be immediately reported to the supervisor and ask for intervention.

An information tablet made of weather-resistant and hard material (size: 30\*15 cm) shall be affixed to the scaffolding showing at least the following:

- the site where the scaffolding was prepared for;
- name of the company, as the constructor of the scaffolding;
- date of the transfer;

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- name and signature of the responsible employee, who inspected the scaffolding prior to its hand-over and confirmed its compliance, and the name and availability of the person who handed over the scaffolding for use,
  - load capacity of the scaffolding (kg / m<sup>2</sup>).

If there is no sign or label as the certificate of hand-over, the use of this scaffolding is strictly prohibited.

The scaffolding shall be equipped with the relevant lighting and shock protection.

## **8.8 Safety rules for manual and machine-operated earthworks**

Earthwork is qualified as an activity, when manual or machine intervention is performed at least in **30 cm depth** versus the original ground level (earth removal, drilling, pile driving, terrain arrangement). **Manual or machine intervention deeper than 80 cm will be qualified as HSE critical activity.** Prior to starting any earthwork all underground utilities, cables and pipelines shall be mapped in the area, and the operator will provide the relevant information (map showing the place of underground utilities, cables and pipelines).

Law Decree nr. **4/2002. (II. 20.) SZCSM-EüM** contains the general rules for soil working and earthworks.

Among earthworks every activity, which requires the break-up of earth/soil at **1,2 meters deeper** than the original ground level in the environment of the technology area or technology will be qualified as high HSE risk operation and a **confined space permit shall be obtained** if any human activity is performed in the area.

In case of earthwork involving machines the operator shall provide the detailed map for the given area, as the appendix of the order.

If the earthwork may cross the line of a sub-surface facility or it is closer than 1 m, an exploratory trench shall be prepared at a depth of the planned earthwork plus 20 cm. This exploratory trench shall be prepared manually maintaining a gradual progress. The size of this trench cannot be smaller than 1.8x0.8 m. Once the work reaches the signalling band or cover soil, pickaxe shall NOT be used, and intensified attention and carefulness shall be secured for the subsequent excavation works!

Earthwork using machines shall be performed only with appropriate consideration and care. In areas, where manual excavation is prescribed no work using machines is allowed. In case when machine is used for the work one (1) head watchman shall be secured, who will supervise the work performed by the machine beyond the effect radius of the machine in order to prevent and avoid any eventual damage to the pipeline or cable that are not shown on the maps.

If the contractor identifies any unidentified pipeline, cable or bullet/grenade in the construction area, then it shall immediately stop the work and inform the technical supervisor, the area manager, and **the competent manager who ordered the work.** The contractor shall record this situation into the construction logbook.

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Every cable and pipeline found underground shall be regarded as energised, or under pressure, respectively as long as it has been identified and not energised and de-pressurised.

Cable with damaged insulation or cut cables shall NOT be touched due to risk of electric shock. In case a cable and pipeline is cut or damages, it shall be immediately reported to the operator's contact officer.

The event shall be recorded into the construction logbook.

The location of default/deficiency shall be marked / barricaded with good visibility method, and shall not be covered with earth/soil.

Interrupted earthwork can continue only if it exposes no hazard and this is confirmed by a specialist expert, and the area manager approves such continuation, also modifying the conditions of work, if so required.

Re-filling work can start only in possession of a new permit (to start the work, to lit fire, confined space entry). Prior to starting re-filling work the Corporate Security's representative shall be informed.

In case of earthwork the working trench shall be prepared in accordance with the requirements specified in Law Decree nr. **4/2002. (II. 20.) SZCSM-EüM** in order that

- the lifted earth cannot fall back into the working trench (through installing a 0,5 m rupture plane),
- work trenches walls can be secured against falling or collapsing (with timbering or appropriate sloping),
- the chance for safe escape from the working trench can be always secured for the employees in case of danger under all conditions (this shall be typically secured with a ladder, which shall remain in its place throughout the operation.).

In case of performing earthworks, the contractor working in the given area shall secure and maintain the following minimum headcount:

<b>Activity</b>	<b>Minimum headcount need</b>
Manual earthwork to 1,2 m depth	2 heads
Manual earthwork deeper than 1,2 m	3 heads
Earthwork by machine at any depth	2 heads

Conditions for permitting earthwork:

- the headcount required for performing the given earthwork is available,
- dangerous energies (underground pipelines, electricity wires, control technology cables) located in the technology area affected by the earthwork were mapped, including isolation, lock-out and marking, if and as required,
- conditions of confined space work are fulfilled (exclusively for manual earthwork at 1,2 depth or deeper, or, irrespectively of depth, when the work can be performed by leaning below the ground level),
- the calibrated equipment required for the statutory continuous air test are available (continuous air test is not statutory only presence of combustible and toxic gases can be for sure excluded – e.g.: in greenfield project).

During earthworks:

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- in case of works in depth between 0,25 m and 1,2 m **warning bands** (red-white or yellow-black band, warning people approaching the work trenched) shall be used at 1 m height),
  - in case of works deeper than 1,2 m **protective railing** (with minimum 1 m high stabile installation – e.g.: railing made of wooden board – structure made of wooden planks, which can physically prevent falling) shall be installed around the working trench at 1 m from the edge.

In case of earthwork the construction logbook shall be kept (obligatory), and the contractor performing the earthwork will be responsible for doing so.

### ***8.9 Safety rules for primary opening of dangerous vessels (equipment)***

Every opening of vessels or equipment which during ordinary operation may produce dangerous material/sediment and when opening this in itself exposes hazard (e.g.: toxic catalyst), or if contacting air it may lead to a risk (e.g. contact of pyrophoric material with air).

These activities will always qualify as activities subject to HSE Plan, and during such work the following rules shall be complied with:

- probability of leakage or release of materials and energy etc. into the open air during the activity shall be assessed, including its potential consequences,
- capture, storage and treatment of the leaking materials shall be secured,
- appropriate protective equipment shall be secured for persons performing the work based on the eventually leaking materials; if required by providing a full-body protection clothes, and a self-contained closed circuit respiratory equipment,
- persons at work shall be informed on potential hazards,
- if presence of pyrophoric material can be assumed, then continuous watering shall be secured,
- gas concentration test shall be secured for the leaking components,
- the working area shall be delineated in accordance with the conditions and entry of unauthorised persons shall be prevented,
- minimum two persons with the required competencies shall perform the work and who have been trained regarding the risks related to the work process, and have the required protective equipment,
- if the work includes the opening of several equipment, then the contractor shall apply for the relevant permit for each such equipment.

### ***8.10 Safety rules for clean-up works using chemicals***

Using dangerous chemical materials (toxic, harmful, irritating, explosive, inflammable, oxidising, corrosive, dangerous to the environment) for clean-up work/washing/rinsing of technology equipment in which not only clean water was/could be under ordinary circumstances.

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The chemical clean-up works require permit to work even in case of area hand-over.

Cleaning the technology equipment with chemical treatment is qualified as activity involving dangerous materials and preparations, thus during the work process the contractor shall comply with the requirements specified in Act XXV of 2000, the Chemical Safety Act (Kbvt).

Cleaning works using chemicals will be qualified as HSE critical activity, thus they always require permit to work.

Work involving dangerous material/preparation (chemical treatment) can be performed only, if:

- the dangerous material/preparation has the required safety data sheet, and both the material and the activity have been reported to the competent authorities,
- the risk assessment for the parameters/qualities of the dangerous material/preparation and the nature of the relevant activity has been prepared, and the actions pursuant to its findings and required for risk management (to avoid, prevent or mitigate to tolerable levels) have been implemented,
- employees performing the work are competent and qualified for the activity, and are aware of the risks, just like other stakeholders,

No carcinogenic compound will be applied during the activity.

This activity may be performed in the area in consideration with the following:

The system shall be closed regarding the circulating liquid, whereas the ordering party will decide whether a closed system is needed with respect of leaking or emerging gas, based on the conditions! If release of directly toxic (e.g.: hydrogen sulphide) is possible, the system shall be closed also for gas so that the released gas can be neutralised in the technology, or can be safely captured and removed. However, if the emergence of a non-directly toxic gas is possible (e.g.: carbon-dioxide in an open space!), then there is no obligation for installing a closed technology, and the operator's approval shall be always obtained.

Throughout the operation minimum two (2) self-contained closed circuit respiratory equipment shall be secured on the spot if dangerous gas may be released. Protective equipment shall be used (as obligation) during critical operations (e.g. clean-up works with the appearance of dangerous or major volume of gas), and during rescue operations.

During the activity a continuous personal air analyser unit shall be used including an instrument calibrated for the eventually emerging gases, and this instrument shall be located in the vicinity of the breathing zone of the person at work (e.g. fixed onto his clothes).

The dangerous space/area shall be marked with physical fence in order to prevent entry of unauthorised people. Parallel works in dangerous (three dimension!) space shall be restricted.

Storage vessels used for circulating chemicals shall be installed at an area with good ventilation and quick and safe accessibility. The connecting hoses shall be equipped

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with fix connections to prevent eventual dislocation. Wind bag, etc. shall be installed in the direct vicinity of the activity.

The manager issuing the permit will provide information to the applicant of the permit on the dangerous materials in the technology system by filling-in the „Operator’s data” section of the **chemicals clean-up data sheet**.

The manager issuing the permit will prepare and submit a proposal (by filling-in the „Contractor data” section of the data sheet) on the applied technology process (the data sheet will not substitute the elaboration of the detailed technology and the related risk assessment).

Hazards and risks caused during the chemicals clean-up work caused by the used dangerous materials shall be considered (based on the safety data sheets) and protection shall be secured against the harmful effects through organisational actions, collective or individual protection (face and eye protection, hand protection, breathing protection, etc.), and these actions shall be also described in the HSE plan and the permit to work. Presence of harmful and toxic materials that may be released during the clean-up work shall be also considered, in addition to the used dangerous materials.

Employees named at the section: „Approval” will sign the data sheet as the approval of the technology process.

The chemicals clean-up data sheet will be made available by JMSR later on.

In case of working environment, where vapours of toxic and harmful materials might be present, respiratory equipment shall be used. In case of work in confined space and environment short of O<sub>2</sub> exclusively closed circuit respiratory apparatus can be used. Respiratory equipment based on other filtering method can be also used, if the nominal protective factor of the breathing protection can secure the required level of protection against the emerging dangerous vapours.

In an atmosphere full of inert gas only closed circuit respiratory apparatus equipped with dual safety respiratory system can be used.

Chemicals clean-up work shall not be performed alone even if the process is closed and fully automated.

### ***8.11 Safety rules for high-pressure clean-up works, and bead (abrasive) blasting***

In case of high-pressure clean-up systems transformation of energy may expose certain hazards and individual protection shall be always used as protection against such hazards.

This will include industrial clean-up works using high-pressure water (higher than 300 bar), and every abrasive blasting cleaning work (including dry ice blowing clean-up work).

In case of high-pressure cleaning systems the extensive energy transformation may expose dangers, and personal protection shall be always used to prevent such dangers.

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In case of high-pressure clean-up using water or abrasive blasting, the following supplementary personal protection equipment shall be used:

- Full-face protection
- Respiratory protection (for abrasive blasting)
- Hand protection (against chemical and mechanical effects)
- Protective clothes

The cause of this hazard might be the direct water or bead jet and particles flying back from the surface.

In case of bead (abrasive) blasting with ordinary quartz might cause silicosis, thus it is extremely important to select the appropriate respiratory equipment. In case of bead (abrasive) blasting in confined space exclusively closed circuit respiratory apparatus shall be applied.

If abrasive blasting is required combined with entry into confined space the air analysis can be held inside the equipment with periodical frequency. This shall be recorded on the permit to work.

### ***8.12 Safety rules for radioactive activity***

The contractor shall report the radioactive activity prior to starting the work. Radiological seam test can be performed only if the radioactive radiation causes no disturbance to the isotope instruments and equipment installed in the site.

During the work the contractor shall ensure the appropriate shielding for the working area. Radioactive material can be carried into or taken out the area only with the relevant permit.

Radioactive activity can be performed only by contractor who has the required official permit or license.

### ***8.13 Safety rules for working alone***

The following persons cannot be assigned working alone: who are participating in full-time school-type education, students during professional practice period, and employees during training time with work exposed to enhanced danger or hazard.

Working alone is forbidden in the following activities:

- HSE-critical activities (as specified under Point 2 of this Regulation),
- cutting the technology and its accessories, drilling under pressure, welding, and strength test and tightness pressure test,
- work in energised places (in electricity operator room, switching rooms in electricity plant),
- operation with aggregator during the work,
- material movement using machine, lifting loads,
- revision and maintenance of installed signal and alarm systems aiming at protection of life, and pressure isolation equipment / valves,
- earthwork with machines,
- scaffolding construction works,
- other works that require energy isolation,

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The permit issuer shall always make sure that headcount required for the given work is available (e.g.: prior to issuing the permit to work).

## **8.14 Traffic rules**

There are specific and individual traffic rules in effect in TVK Plc. regarding the speed limit. The security service is authorised for holding regular speed limit control of vehicles using radar equipment. Drivers who may breach the speed limit may face penalty. Rules of the Traffic Code will be applied onto traffic within sites and off-sites, and line-bound workplaces.

### **8.14.1 General requirements**

Driving speed

- Motor vehicles (except for fork lift trucks), bicycles with attached motors 30 km/h
- Fork lift trucks
  - In workshop halls
  - On areas used for warehouse 5 km/h
  - On roads without side walks 10 km/h
  - On open, not built-in areas not used for pedestrian traffic 15 km/h
  - On public road like roads with side walks 20 km/h
- Other vehicles (motored or towed power machines, bicycles, etc.) 10 km/h

These vehicles shall not drive at a higher speed than those indicated above.

### **8.14.2 Motor vehicles and power machines**

- a.) According to the order of traffic of vehicles used for road transportation,
- o A vehicle is regarded as being a transportation vehicle, if it ships goods in or out of the TVK Industrial Site.
  - o Transport vehicles can enter the site free of charge.
  - o Transport vehicles arriving at TVK Industrial Site in order to deliver goods shall enter and leave the Industrial Site through gates N° II, III, IV, and V, while cars can drive in and out through gates N° I and IV.

Contractors' transport vehicles can drive in and out through gates IV or V.

- o Upon entering the site, the drivers of the vehicles will be given cards marked E (one-time shipping), which entitle also the escort personnel to enter. It is the duty of the admission personnel to issue authorisation to the vehicles to drive in the specific zones of the site.
- o When vehicles drive in and out, the admission personnel shall record the data below:



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- The time of entry and leave,
  - Drive-in card number,
  - The registration number of the vehicle and of its trailer and the site of the owner (operator),
  - The name, citizenship, ID card number or passport number of the driver,
  - The number of escort personnel,
  - Shipping address,
  - Serial numbers of the delivery note and invoice,
  - The name of the gatekeeper making the check for admission.
- b.) Vehicles shall not leave built roads and parking lots to proceed on metalled roads, parked areas or open areas not designated for traffic!
- c.) The weights and dimensions of vehicles driving on the roads in TVK Industrial Site care shall not exceed those specified in home and international specifications (height: 4.00 m; width: 2.22 m; length: 20.00; total mass: 40.00 tons). Vehicles with oversized cargoes are allowed to drive inside the plant area only under a permit issued by Logistics and under the supervision specified by it. Oversized motor vehicles and power machines without the specified supervision shall not enter and leave the site through the gates.
- d.) Motor vehicles and power machines may park only in the designated parking lots. Vehicles delivering hazardous materials shall not stop or park over sewer covers, drain covers, and visible cable trenches!

### **8.14.3      *Driving electric trucks***

- a.) Electric trucks can drive in and leave the site through gates N° III and IV. Drive-in permits for electric trucks are issued by Security Service Provider. In exceptional cases, the security service provider may allow electric trucks to use other gates, too.
- b.) While driving an electric truck, the driver shall observe the requirements in item 2.1.1 above.

### **8.14.4      *Verification of the order of traffic***

- a.) The functional direction of the internal traffic on TVK Industrial Site is the duty of the Security Service Provider under a specific contract. The following units and their authorised representatives can verify if the rules of traffic and material handling as are stated by law and standard specifications are observed:
- o Security Service Provider;
  - o SD and HSE unit.
- b.) When the rules of traffic are violated, actions shall be taken by
- o The personnel of the security service provider,
  - o The representatives of SD and HSE unit.
- c.) Security Service Provider can take any of the actions below against those not observing the rules of traffic:
- o Warning;
  - o Initiate that violator's employer takes a disciplinary action against his employee;
  - o Propose that Legal Affairs banning such persons from entering TVK Industrial Site;

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**Security Service Provider may initiate a case of offence with the competent Police Office against those violating the National Rules of Traffic while driving on TVK Industrial Site roads.**

## **9. Documents to be kept on the working site**

The (sub) contractor shall keep and present at audits the following documents at the working site:

- permit to work,
- Entry pass issued on the employee's name and also showing the contractor's name (where the system has been introduced),
- HSE booklet, (documentation of training),
- document(s) in accordance with the type and conditions of the performed work activity, verifying the qualification and competences required for the relevant works, and the relevant valid written permit(s),
- valid document verifying valid the occupational-health fitness,
- working area hand-over/take-over protocol (if there was any such hand-over),
- the approved HSE plan (in case of critical activity),
- safety data sheets of dangerous materials and dangerous preparations used during the works,
- permit, license and certificate depending on the type or nature of the given activity, and arising from or related to the legal regulation or other external or JMSR internal regulations,
- the protocol drawn up for the last gas concentration calibration test, if there is no identifiable signal or mark fixed onto the instrument related to the test,
- the updated list of working equipment used for the work and obliged for periodical inspection, and documents verifying the last inspection ok (e.g.: lifting machine logbook, periodical inspection protocols, etc.),
- construction logbook.

## **10. HSE audits and potential consequences**

During the work JMSR's representatives (HSE experts, employees of Project Management, representatives of the operator units) may perform on-the-site audits in order to audit the compliance of the work with the relevant regulations. These audits are focusing onto ensuring compliance with the requirements specified in the effective and relevant laws and in internal (HSE) regulations.

Every site HSE audit shall be recorded in a memo (in case of irregularity – a protocol), and the supervisor of the audited contractor (or his appointed employee) and the person who held the audit shall sign off this document.

The contractor accepts that JMSR will be entitled to impose the following sanctions for events of non-compliance identified and documented during the on-the-site audits, subject to the weight of the given event of non-compliance:

- 
- to call upon for supplementing the missing document, etc. (immediately, or by a deadline)
  - to order to repeat the HSE training
  - to cancel / withdraw the permit to work
  - to impose a HSE penalty
  - to ban the contractor's employee(s) from entry into JMSR site for a definite period
  - to terminate the contract with immediate effect.

The contractor accepts that JMSR may impose HSE penalties described in Attachment 1. onto the contractor for event of non-compliance identified during the on-the-site audits.

## **11. Causing and reporting HSE events and eventual consequences**

A Contractor shall report every event, which has caused:

- personal injury,
- fire or smoke,
- a technical incident leading to material loss or damage or break-down of equipment,
- pollution to the environment,
- traffic accident,
- near miss.

The report shall be sent to the manager of the technology area related to the given work and the Ordering Party (the party that was identified in the contract as the Ordering Party's representative) if the event affected the employees of the Contractor and its eventual sub-contractors. Verbal report shall be repeated also in writing within 24 hours.

To help the investigation (post-event), the site shall be secured against changes (as far as reasonably possible) until the expert of the plant has arrived. Only the plant staff or JMSR experts involved into the investigation may take photos on the site and the circumstances.

The Contractor shall order an immediate investigation to determine the root causes of the event and document the process in accordance with the relevant laws and regulations, and in case of personal injury report the case to the competent authorities. Contractor shall involve JMSR's representative into the investigation through consultations, and provide him a copy of the investigation protocol.

The Contractor shall directly pay compensation for damages it or its sub-contractors caused to JMSR assets (buildings, technology equipment, vehicles, roads, railing of entry system, other engineering objects, etc.) based on the protocol. The Contractor shall reports every event of damage and criminal action against property to the local security service.

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## 12. Actions in case of emergency

The contractor shall get acquainted with the rules of the alarm system in effect in the site, the method of alarm, assembly and lock-up places, emergency phone numbers, and the expected rule of conduct.

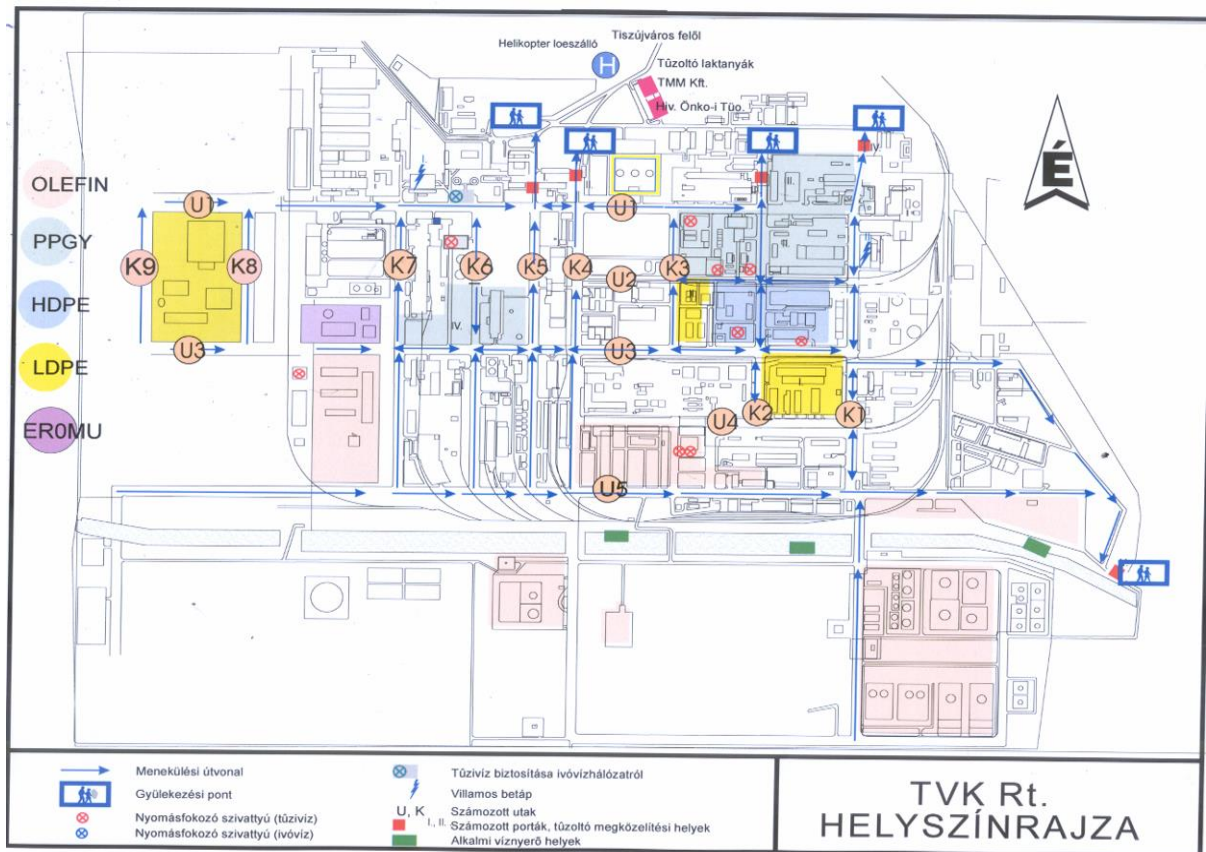
Employees appointed as trainers will explain the rules of alarm in effect at TVK Industrial Site through the area-specific training. The relevant information for some selected key areas will be made available later on by JMSR.

### 12.1. Upon hearing the sound of a siren or emergency horn

- o The driver shall immediately drive its vehicle to a place where it does not hinder upon traffic (rescue), stop its engine, and turn off its electric consumers;
- o Those staying in the danger zone and not assigned to performing any actions of hazard elimination shall leave the site and quickly proceed to a place according to the instructions of those directing the rescue operation.

### 12.2. The evacuation routes and the places to gather in:

<b>Organisational unit, work area</b>	<b>Evacuation route</b>	<b>Place of gathering</b>
1. Olefin-1 Plant office, Olefin Quality Control Tank Farm area Product and Application Development	Eastward to Admission Gates N° V, and on the left sides of roads U5 and K1 to Gates N° IV.	Areas outside Gates N° II, IV, and V.
2. ENE Water Supply section, ENE VHÜ	On the left sides of plant roads K1 and U3 (to the gates) to Gates N° I and to Gates either N° IV or V.	Outside Gates N° IV and V (down the road next to the small forest to Gyári út).
3. Olefin-1 Plant, LDPE-2 Plant, HDPE-1 Plant, PP-3 Plant, Assets Management	On the left sides of plant roads K4; K3; K2, and K1 (to the gates).	Outside gates N° I, II, and III (up to Gyári út)
4. Energy Supplies Central Laboratories SD and HSE, PP-4 Plant	On the left sides of plant roads K4, K5, and K6 (to the gates).	Outside Gates N° I, II and III up to Gyári út).
5. Olefin-2 Plant, HDPE-2 Plant, JMSR SSB plant	On the left sides of plant roads K7 and K8 (to the gates) to Gate N° X.	Outside Gates N° X.
6. Central Office bldg	Through the main entrance	Volán's bus terminal



TVK Plot Plan

### 4.3. Reporting on extraordinary incidents

Contractors and their employees entitled by their valid entry cards to enter the site in order to perform jobs for JMSR under direct or indirect contracts shall report on any incident that has caused or might have caused personal injury, or fire, or damage to the assets or environment during the performance of or in association with their operations performed inside TVK Industrial Site surrounded by a continuous fence.

In line with meeting his internal reporting obligation, Contractor shall report verbally on any extraordinary incident occurring daytime to the unit having issued his work permit, implement the necessary damage control, and secure the site of the incident.

**He shall also report the incident to the Integrated Operation Management (phone +36-70/3739-090), and to Client's representative or supervisor.**

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### **13. Waste management, materials storage and housekeeping**

The contractor shall collect all wastes generated or produced during its activity and in its ownership (e.g. paint boxes, aerosol cylinder, other packaging materials, communal wastes) at the working site, in an environmentally-friendly manner and having the relevant label or signage, and transport such waste from the site at the conclusion of the daily work.

The contractor shall continuously ensure the proper housekeeping in the working area during the work performance, and to maintain perfect status of the working area throughout the weekly and the entire work process in respect of safety and fire protection, with consideration to the regulations applicable onto treatment and storage of wastes. The hand-over and take-over of work can be performed only in case of fully acceptable housekeeping in the area.

The non-hazardous and hazardous wastes generated during contractors' work shall be collected selectively and separated by sort and state. The contractor has to ensure of the waste treatment. The soil from earthworks, what is not used for backfilling shall be placed in TVK Industrial Site.

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## Schedule 1.

### **Sanctions imposed by the ordering party due to deficiencies and violation of rules identified during on-the-site HSE audits and provisions for their application**

1. Client's representative(s) will be entitled to hold an audit at any time during performance checking compliance with the relevant HSE regulations in accordance with the provisions of the contract.
2. Client's representative(s) will record the findings and conclusions made by during such audit(s) into a protocol, and the leader of the audited workers will sign this document.
3. If Client's representative finds or concludes during the audit that the audited company violated the HSE regulations during its performance or work, then Client will impose a penalty based on the records in the protocol(s) or apply "Other actions/consequences" as specified under Point 11.

The audited company further agrees to perform and follow the actions identified in the state of affairs enlisted under the following Point 11., in conformity with Client instructions.

Payment of penalty(ies) described under Point 11. will not release the company from other consequences specified for the breach of contract, and/or from more serious legal consequences specified in the relevant laws and regulations.

4. If Client can identify several times during the performance of the contract or individual work order the state of affairs as the basis for imposing the penalty in the on-the-site audit, the penalty may be imposed also several times under the said state of affairs.
5. In case several deficiencies (state of affairs for penalty) emerge simultaneously, the penalty may be imposed individually or in combination after each state of affairs.
6. Contractor company will mean the partner contracted with and by Client, and this party will be responsible also for the involved sub-contractor (just like for itself).
7. Client will summarise the content of the on-the-site audit protocols establishing the state of affairs, as the basis for imposing the penalty within 45 days following the audit and simultaneously take action for imposing the penalty. On-the-site audit protocol(s) and protocol drawn up and showing the amount of the penalty and other relevant data (violation of rule, etc.) shall form appendices of the notice of such penalty.
8. Employees will mean the employees of the Contractor company and its sub-contractors.
9. Definitions related to the state of affairs shall be always interpreted in accordance with the relevant provisions of the then effective HSE laws and regulations (health protection, safety technology, safety, environmental protection) and the contract.
10. Expulsion will mean the immediate cancellation/suspension of the work process by Client. In case of imposing a ban from a Client's site, the given employees cannot be given a valid entry pass into and cannot perform any work on the relevant area or site during the term of such ban.
11. Presentation of penalty-bound state of affairs, sanctions and actions if such a state of affairs is detected or identified:

Serial number	Scope of the audit, conclusions/findings	Penalty amount (net HUF)	Penalty amount (net EUR)	Other action/ consequence
<b>1.</b>	<b>Smoking, using ignition source in prohibited area</b>			
1.1	Smoking in not designated area – irrespective of fire hazard category	100 000 /person	330 /person	<u>to ban the person's entry into Client's site for one (1) year</u>
<b>2.</b>	<b>Working without permit to work</b>			
2.1	Missing and/or invalid „general work permit” for the given work or activity	200 000	660	Immediate expulsion and <u>to ban the supervisor's entry into Client's site for one (1) year</u>
2.2	Missing and/or invalid „hot work permit” for the given work or activity	200 000	660	Immediate expulsion and <u>to ban the supervisor's entry into Client's site for one (1) year</u>
2.3	Missing and/or invalid „confined space work permit” for the given work or activity	200 000	660	Immediate expulsion and <u>to ban the supervisor's entry into Client's site for one (1) year</u>
2.4	Missing and/or invalid „vehicle entry permit” for the given work or activity	50 000 /vehicle	165 /vehicle	To remove the vehicle from the area or site
<b>3.</b>	<b>Violation of rules relevant to isolation of dangerous materials/energy</b>			
3.1	Failure in isolation of dangerous material and energy specified in the permit to work (if it is the contractor's responsibility)	200 000	660	Immediate expulsion and <u>to ban the supervisor's entry into Client's site for one (1) year</u>
<b>4.</b>	<b>Not using/wearing the prescribed life-saving protective equipments</b>			
4.1	The respiratory equipment (except face mask) prescribed in the permit to work or laws or regulations is not used and/or its protection capacity cannot be identified and/or it is inadequate.	100 000 / person	330 / person	If it was available but the employee did not use it, then <u>to ban the employee's entry into Client's site for one (1) year</u> . If it was not available, then <u>to ban the supervisor's entry into Client's site for one (1) year</u>
4.2	The anti-fall body harness prescribed in the permit to work or laws or regulations is not used, and/or the equipment is not properly fixed to the fastening point (simple waist belt, or rescue belt will not be acceptable), and/or the body harness is in unacceptable status and/or its inspection was not performed.	100 000 / person	330 / person	If it was available but the employee did not use it, then <u>to ban the employee's entry into Client's site for one (1) year</u> . If it was not available, then <u>to ban the supervisor's entry into Client's site for one (1) year</u>
<b>5.</b>	<b>Failure in performing the prescribed gas concentration test(s)</b>			
5.1	The personal gas concentration measuring equipment prescribed in the permit to work is not used (including also the use of technically default or deficient or switched-off equipment)	200 000	660	If it was available but the employee did not use it, then <u>to ban the employee's entry into Client's site for one (1) year</u> . If it was not available, then <u>to ban the supervisor's entry into Client's site for one (1) year</u>
<b>6.</b>	<b>Protection against collapse is missing</b>			
6.1	Protection of the working trench against collapse with slope or ramp or timbering, sheeting is missing or inadequate, material is stored on the rupture plane, ascending and escape is not secured (the HSE plan shall prescribe the method of protection against collapse).	200 000 /entry	660 /entry	Immediate expulsion and <u>to ban the supervisor's entry into Client's site for one (1) year</u>
<b>7.</b>	<b>Safety equipments are removed or missing</b>			



7.1	Equipments and signals that have material impact onto safety are removed or they are off-compliance.	200 000	660	Immediate expulsion and <u>to ban the supervisor's entry into Client's site for one (1) year</u>
<b>8.</b>	<b>Violation of regulations relevant to lifting operations</b>			
8.1	There is a person under the load in the air.	200 000 / person	660 / person	Immediate expulsion and <u>to ban the supervisor's entry into Client's site for one (1) year</u>
8.2	The lifting area is not fenced-off.	50 000	165	Correction, and expulsion in case of repeated deficiency
8.3	Persons are lifted using a lifting machine/equipment (except lifting machine, elevator, lifting platform with cage specifically designed and tested for this operation).	200 000	660	To immediately stop lifting operations
8.4	The permitted load capacity is not shown on the lifting machine.	50 000	165	Correction, and expulsion in case of repeated deficiency
8.5	Limits specified in the loading curve for the given machine are exceeded	200 000	660	To immediately stop lifting operations
8.6	No action was taken to prevent accidental start of working machine or vehicle (e.g. ignition key remained in place while its operator is not in the direct vicinity of the machine).	100 000	330	To immediately remove the key from the machine and give back only after recording into protocol To eliminate deficiency
8.7	Driver left the vehicle with running motor.	100 000	330	
8.8	Manual control and positioning of the load is not performed in compliance with the effective regulations during a lifting operation with machine.	100 000	330	To eliminate deficiency, expulsion in case of repeated deficiency
8.9	The logbook of the lifting machine is not on site and/or it is not continuously kept	100 000	330	Correction, and expulsion in case of repeated deficiency
<b>9.</b>	<b>Proven consumption of alcohol or drug</b>			
9.1	Consumption of alcohol or drug proven by an audit or investigation performed by MOL Plc. Corporate Security on behalf of Client	200 000 / person	660 / person	<u>To ban the relevant employees for 1 year from Client's sites</u>
<b>10.</b>	<b>The required documents are missing</b>			
10.1	The construction logbook was not opened and/or it is no up-to-date and/or not at site.	50 000	165	Expulsion until correction/make-up work
10.2	There is a sub-contractor's employee at the working area which is not reported in the contract.	500 000	1670	Sub-contractor's immediate expulsion from the working area
10.3	Older than 1-year basic and site-specific HSE training and/or missing or invalid HSE booklet (where this booklet is an obligatory item)	50 000 / person	165 / person	Expulsion until correction/make-up work
10.4	The HSE plan approved by the business HSE unit is missing (if subject to HSE Plan in accordance with the appendix of the contract with the ordering party)	100 000	330	Correction, and expulsion in case of repeated deficiency
10.5	The written appointment (or its copy) approved by the employer (company) for the permitted work is not available at the site or it is not valid	100 000	330	Correction, and expulsion in case of repeated deficiency
10.6	The valid medical document (fit for duty certificate) for the given work is missing	10 000 / person	35 / person	Correction, and expulsion in case of repeated deficiency
10.7	Personal qualifications required for the work are missing (certificates, special exams, e.g. fire protection, mining safety)	100 000 / person	330 / person	To suspend/stop the work of the given person until make-up work, expulsion if repeated
10.8	Updated list of equipments and machines on-site is missing	50 000	165	Correction
10.9	Equipments and machines on-site cannot be identified with those recorded in the	25 000 /equipment	85 /equipment	Correction

	equipment list (no marking, or it is worn-out, etc).			
<b>11.</b>	<b>Conditions specified in the relevant permit to work are not fulfilled</b>			
11.1	Conditions specified in the relevant permit to work (other not shown in the present list) are not fulfilled.	25 000 /rule	85 /rule	Until correction/make-up to suspend work performance
<b>12.</b>	<b>Escape routes are not secured</b>			
12.1	Traffic roads, passageways, escape routes, emergency exits are blocked due to reasons attributable to the contractor.	100 000	330	Correction, and expulsion in case of repeated deficiency
<b>13.</b>	<b>Unacceptable housekeeping and behaviour</b>			
13.1	Materials delivered by the contractor to the working area or produced during the work or de-commissioned materials are not stored in the designated area. Dangerous and not dangerous wastes are not collected and transported as prescribed in laws and regulations, if the contractor is responsible for the transportation.	50 000	165	Correction, and expulsion in case of repeated deficiency
13.2	There are unsafe protruding nails and sharp objects in the working area due to reasons attributable to the contractor.	50 000	165	Correction, and expulsion in case of repeated deficiency
13.3	There are pipelines and hoses across on passageways, traffic roads without mechanical protection and/or the mechanical protection may cause slipping. Electric cables as overhead wires are not fastened at multiple points as required.	20 000	70	Correction, and expulsion in case of repeated deficiency
13.4	Negligent or careless behaviour that may expose hazard onto the worker and others in the vicinity of work.	100 000	330	
13.5	Exceeding speed limits defined in the site	100 000 /vehicle	330 /vehicle	Expulsion of driver for 1 year from Client's sites in case of repeated deficiency
13.6	Failure in reporting HSE events that occurred during work	100 000 /event	330 /event	<u>To ban the relevant employees for 1 year from Client's sites</u>
<b>14.</b>	<b>Conditions for providing first aid are not secured</b>			
14.1	The on-the-site work supervisor was not appointed on the „Appointment” or the permit to work or he is not present in the site or he did not appoint a substitute.	50 000	165	Correction
14.2	The work supervisor does not wear the red armband	50 000	165	Correction
<b>15.</b>	<b>Social infrastructure is not secured</b>			
15.1	Cleaning products, room for rest and eating and seasonal protective drinks are not secured for the employees.	50 000	165	Correction
<b>16.</b>	<b>Appointment and identification of supervisor is not acceptable</b>			
16.1	Supervisor was not appointed on the „Mandate Letter” or permit to work or he is not present on the site and did not appoint his substitute.	50 000	165	Correction, and expulsion in case of repeated deficiency
16.2	Supervisor does not wear the red armband	50 000	165	
<b>17.</b>	<b>Storage of gas cylinders is not acceptable</b>			
17.1	Gas cylinders are not stored as prescribed (in fixed status, or not using the cylinder holder).	50 000	165	Correction
17.2	There is no valve safety cap on the idle cylinders.	30 000	100	Correction
17.3	Combustible materials are stored in the direct environment of gas cylinders.	50 000	165	Correction

17.4	Hoses of gas cylinders are not protected against physical hazards of the environment, or they are not properly fixed as aerial line	50 000	165	Immediate correction, and expulsion in case of repeated deficiency
<b>18.</b>	<b>Safety Data Sheet is not available</b>			
18.1	The safety data sheet of dangerous materials stored or used on the site is not available on the site.	50 000 /sheet	165 /sheet	Correction
<b>19.</b>	<b>Storage of dangerous materials is not acceptable</b>			
19.1	Dangerous materials are not in the original manufacturer's packaging and/or they cannot be identified and/or their storage is unacceptable.	50 000 /material	165 /material	Correction
<b>20.</b>	<b>Watchman persons are not properly appointed and are not be appropriately identified</b>			
20.1	Watchmen were not appointed or not in the prescribed number or they do not stay in the designated points and do not perform their duties.	100 000 / person	330 / person	Until correction/make-up to suspend work performance
20.2	The watchmen do not wear the prescribed yellow armband	50 000 / person	165 / person	Correction
<b>21</b>	<b>Fire fighting equipments are not properly secured</b>			
21.1	The fire fighting equipments are not secured on the working site in the number and type as prescribed in the permit to work	100 000	330	Expulsion until correction/make-up work
21.2	The safe and ready-to-use status of the prescribed fire fighting equipments cannot be verified (sub-titles, scripts, seals are missing)	100 000	330	Expulsion until correction/make-up work
<b>22.</b>	<b>Inadequate scaffolding</b>			
22.1	The three-line railing is missing on the working levels (railing, knee plank, foot plank).	100 000	330	Expulsion until correction/make-up work
22.2	Terminal railing is not fixed.	50 000	165	Expulsion until correction/make-up work
22.3	Appropriate ramp for safe approach to the working level is not secured.	50 000	165	Expulsion until correction/make-up work
22.4	The scaffolding has no stabile structure, the proper documentation is missing or incomplete: (Structure layout sketch, scaffolding plan, general structural documentation, commissioning (load capacity and the name of the builder of the scaffolding is not displayed), periodical inspection.)	500 000	1670	Correction
22.5	No lightning arrester was implemented and the compliance certificate is missing.	50 000	165	Correction
22.6	Mobile scaffolding is not secured against accidental movement.	50 000	165	Expulsion until correction/make-up work
22.7	A person is staying on the mobile scaffolding when it is moving.	100 000 / person	330 / person	To immediately stop operations
22.8	Scaffolding erected from inadequate materials is used in an area exposed to physical and/or chemical effects (e.g.: aluminium scaffolding and ladder cannot be used in calcareous and alkaline medium).	50 000	165	Correction/make-up Until correction/make up the scaffolding cannot be used!
<b>23.</b>	<b>Work on ladder is not acceptable</b>			
23.1	The ladder is damaged, broken or injured in any other way, or has slippery steps, the anti-skidding is out of operation, two-legged ladder is not secured against slipping.	200 000	660	To immediately make up the deficiency
23.2	Legs of the ladder are not in stabile position.	50 000	165	To immediately make up the deficiency

23.3	The supporting ladder does not protrude at least 1m versus the level of arrival or there is no handrail or grip at this level.	50 000	165	To immediately make up the deficiency
23.4	The work going on at the supporting ladder prevents safe hold or grip for the employees.	50 000	165	Until safe conditions are secured - expulsion
23.5	Wheel-type ladders are not fixed against rolling or moving.	50 000	165	Immediate correction. Expulsion until correction
<b>24</b>	<b>Violation of regulations for not „life-saving” protective equipments</b>			
24.1	Protective glasses are not used when prescribed and/or the protective capacity cannot be identified and/or is inadequate.	20 000 / person	70 / person	Correction, and expulsion in case of repeated deficiency
24.2	The employees do not wear the safety helmet (except office work and other work not exposed to the risk of falling objects), or its status is poor, validity date expired and/or its protective capacity cannot be identified.	20 000 /person	70 /person	Correction, and expulsion in case of repeated deficiency
24.3	No ear protection equipment is used though required and/or its protective capacity cannot be identified, and/or inadequate.	50 000 /person	165 /person	Until correction/make-up to suspend work performance
24.4	Protective shoes/boots are inadequate to the hazard, and/or the protective capacity cannot be identified and/or inadequate, they lost the protective capacity.	20 000 /person	70 /person	Until correction/make-up to suspend work performance
24.5	The used protective clothes are not appropriate to the hazard or danger (i.e. to the requirements in effect on the site!)	20 000 /person	70 /person	Until correction/make-up to suspend work performance
24.6	The used safety gloves are not appropriate to the hazard or danger at the site (physical, chemical hazard) and/or the protective capacity cannot be identified.	20 000 /person	70 /person	Until correction/make-up to suspend work performance
24.7	Respiratory protective equipments are stored not in clean status and/or they were not inspected in a documented manner (if this is required).	50 000	165	Correction, and expulsion in case of repeated deficiency
24.8	The other respiratory equipments not referred in Point 4.1 are missing	50 000 /person	165 /person	Until correction/make-up to suspend work performance
<b>25.</b>	<b>Marking/signage of work trenches and ditches is inadequate</b>			
25.1	There are uncovered or not fenced-off holes, trenches, ditches, pits, etc. in the working area due to reasons attributable to the contractor.	50 000	165	Correction, and expulsion in case of repeated deficiency
25.2	The site for earthworks is not appropriately separated and/or marked or fenced-off from the pedestrian and road traffic (the elements of barricade or fence cannot cause injuries).	50 000	165	Expulsion until correction/make-up work
<b>26.</b>	<b>Load binding elements are unacceptable</b>			
26.1	The status of the binding elements is inadequate or their documented inspection is not available on the site.	100 000	330	To immediately stop work or operation until correction
<b>27.</b>	<b>Load lifting equipments are unacceptable</b>			
27.1	The status of the lifting machine is inadequate or their documented inspection is not available on the site.	100 000	330	To immediately stop work or operation until correction

<b>28.</b>	<b>Status and/or use of electric equipments, electric small machines and manual tools is unacceptable</b>			
28.1	The status of equipments and small machines is inadequate. The status or technical parameters of electric wires, cables, extensions, connectors and distributors are inadequate.	50 000	165	Correction, to remove the inadequate equipment from the site. Expulsion in case of repeated deficiency
28.2	Switchboards are not grounded.	50 000	165	Immediate correction, and expulsion in case of repeated deficiency
28.3	Status of manual tools is inadequate (e.g. cracked or broken handle, worn-out cogs or tothing, elongated wrench).	10 000	35	Correction, to remove the inadequate equipment from the site. Expulsion in case of repeated deficiency
<b>29.</b>	<b>Violation of regulations for electric safety</b>			
29.1	No isolation transformer or not with the required capacity is used on large metal surface working area or more than permitted consumers are connected to this unit.	20 000	70	Immediate correction, and expulsion in case of repeated deficiency
29.2	No connection was secured with the EPH for welding work of several and large metal structures.	20 000	70	Expulsion until correction/make-up work
29.3	Electric cables are not protected against physical hazards of the environment, or they are not properly secured or fixed as aerial lines.	20 000	70	Immediate correction, and expulsion in case of repeated deficiency
<b>30</b>	<b>Inadequate shock protection/documentation of inspection</b>			
30.1	The shock protection of electric equipments was not inspected / audited and/or the relevant documentation is not available at the site.	25 000 /equipment	85 /equipment	To ban the use of inadequate equipment, including its removal from the site
30.2	Periodical inspection of welding apparatus was not performed or this inspection cannot be identified	25 000 /equipment	85 /equipment	Correction or to remove the inadequate equipment from the working area
<b>31.</b>	<b>Inadequate waste storage</b>			
31.1	The emerged or produced waste is not collected at the location and with the method specified by the operator.	50 000	165	To immediately stop work or operation until correction
31.2	There is no collecting vessel in the sufficient number or in quality secured for collecting the waste generated or produced by the work or operation.	50 000	165	Immediate correction
<b>32.</b>	<b>Releasing dangerous material into the drainage system</b>			
32.1	Dangerous material in not permitted quality and/or quantity is released into the drainage system	200 000 (if there is no further claim for compensation)	660 (if there is no further claim for compensation)	Work suspension, recultivation actions
<b>33.</b>	<b>Pollution of soil, soil water and surface waters</b>			
33.1	During work with dangerous materials the soil, soil water or surface deposit is polluted.	200 000 (if there is no further claim for compensation)	660 (if there is no further claim for compensation)	Work suspension, recultivation actions