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|  | APPROVEDby RusChemAlliance OrderNo. \_\_\_\_\_\_\_\_\_\_\_ dated \_\_\_\_\_\_ 2023 |

**Regulations**

**on the Safe Practices during the Works in Darkness Hours/at Night**

**P-17-2023**

Revision 1

St. Petersburg

**Introduction**

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| **1.** | Developed by: | Industrial Safety Department |
| **2.** | Identification code and Revision No.  | P-17-2023Revision 1 |
| **3.** | BUSINESS Process | P-2 «Environmental Management for Process Running» |
| **4.** | Original enactment |  |

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1. **Purpose and Scope**
	1. The Regulations[[1]](#footnote-1) establishes the regulatory requirements and procedures for the Owner's, Contractor's and Subcontractor's employees to arrange and perform the Works at the Facility in Darkness Hours/at Night. The Regulations requirements are aimed at ensuring occupational safety and preserving the health of personnel while performing works in darkness hours/at night.
	2. The Regulations requirements are mandatory and supplementary in relation to the requirements of the Russian HSE regulatory legal documents. In case of any conflicts between the requirements of the current Russian law and the Regulations, the current Russian law requirements shall prevail. If the Russian regulatory and legal document, which the Regulations refers to, is amended or repealed, the amended/newly accepted document shall be applied.
2. **Regulatory references**

The Regulations references to:

* 1. Current law, Russian regulatory and legal acts and industry-related rules and regulations:
		1. Russian Labor Code No. 197-FZ dated 30.12.2001.
		2. Russian Government Decree No. 1090 "On Traffic Rules" dated 23.10.1993.
		3. Russian Government Decree No. 1479 “Approval of Fire Prevention Regime in the Russian Federation” dated 16.09.2020.
		4. Russian Labor Ministry Order No. 883n "Approval of Occupational Safety Rules for Construction, Reconstruction and Repair" dated 11.12.2020.
		5. Russian Labor Ministry Order No. 903n "On Approval of Occupational Safety Rules for Operation of Electrical Installations" dated 15.12.2020.
		6. Russian Energy Ministry Order No. 811 "On Approval of the Rules for Upkeep & Maintenance of Power Consumer Electrical installations" dated 12.08.2022.
		7. Russian Labor Ministry Order No. 753n "On Approval of Occupational Safety Rules for Loading and Unloading and Cargo Placement" dated 28.10.2020.
		8. Electrical installation code (PUE) (revisions 6 and 7, currently in effect).
		9. SP 52.13330.2016 "Natural and Artificial Lighting", as amended by SNiP 23-05-95 approved by the Russian Construction Ministry Order No. 777/пр. dated 07.11.2016.
		10. GOST 12.1.046-2014. Interstate Standard. Occupational Safety Standards System. Construction. Construction site lighting standards, effected by Rosstandart Order No. 1644-ст. dated 18.11.2014.
	2. Gazprom PJSC current documents:
		1. STO Gazprom 18000.1-001-2021 “Unified Industrial Safety Management System". General.
		2. STO Gazprom 18000.1-002-2020 “Unified Industrial Safety Management System. Industrial Safety Hazard Identification and Risk Management."
1. **Terms, definitions and acronyms**
	1. The following terms are used with the relevant definitions hereunder:

**Emergency lighting** means lighting provided in case
 if the primary lighting power fails.

**After-hours lighting** means lighting during off-hours.

**Contract** means an agreement between two or more parties, as contemplated wherein the Contractor undertakes to render the services (perform certain actions or carry out specific activities) as per the Owner's assignment, whereas the Owner undertakes to pay these services off.

**Public road** means a road intended for the use by the public for vehicular traffic.

**Owner** means RusChemAlliance LLC.

**Russian Law** means any regulatory legal acts of the Russian Federation, including, but not limited to: federal laws, legal acts of the Government, ministries and authorities of the Russian Federation, regional laws and legal acts of the presence regions, mandatory technical rules, regulatory technical documentation, regulations, including those being advisory nature and/or voluntary applied.

**Localized lighting** means lighting additional to the general lighting, created by lighting fixtures that concentrate the luminous flux directly at workplaces.

**Permit-to-work (PTW)** means a work assignment, issued on a specific form established by the Occupational safety rules for the relevant types of work and the Companies CRDs, which identifies the scope of work, location, start and completion time, team composition, workers and persons in charge of the work safety.

**Deficiencies** means any defects, deviations, errors in Works occurred due to any causes including the improper quality of materials or the Works, and deviations of the Works from the Contract requirements, Russian Law, including the requirements to the Works quality.

**Regulatory technical documentation** means the documents which establish the requirements for the Works performed (GOST, SNiP, Standards, Rules and Regulations, Technical Regulations, Practical Guidelines and other documents), including the Owner's HSE-related CRDs.

**Night time** means the time from 10:00 p.m. to 06:00 a.m.

**Facility** means the territory owned or used by the Owner (including under lease agreements) including, but not limited to: construction sites and other places (including public roads, roads connecting construction sites, auxiliary infrastructure facilities, which operation is an integral part of the GPC construction, and the area adjacent to the GPC land allotment at the distance of 50 metres and other areas) where the Works are performed as well as the locations where personnel of the Contractor, Subcontractor, and Owner may be located.

**Companies** means the Owner, Contractor, Subcontractor.

**Illuminance (lux level)** means a physical quantity calculated by the ratio of the luminous flux incident on the surface element containing the lit-up point
to the area of this element, measured in lux.

**Security lighting** means a type of Primary lighting if there are no special technical security means along the borders of territories protected at night.

**Contractor** means an entity engaged by the Owner to perform the Works under the Contract, including employees of such entity (counterparty, engaged by the Owner).

**Regulations** means the Regulations on the Safe Practices during the Works in Darkness Hours/at Night.

**Occupational safety rules for the relevant types of work** mean regulatory legal acts approved by the federal executive authority that exercises functions in shaping and implementation of state policy and statutory regulation of labor, and containing state regulatory requirements for occupational safety.

**Project, GPC** means the Gas Processing Complex within Ust-Luga Ethane-rich Gas Processing Cluster.

**Works** means supply of materials/equipment, construction and installation, commissioning, early (preparatory), special and other associated services and activities, elimination of Deficiencies, security services, all other actions and activities which shall be performed, delivered and undertaken by the Contractor under the Contract.

**Primary lighting** means lighting that ensures a standard lighting level (illuminance, lighting quality) in premises and work areas outside buildings.

**Standby lighting** means a type of Emergency lighting to continue the works in case the Primary lighting is off.

**Site** means a land plot (or its part) handed over by the Owner to the Contractor for the entire period of Works via the handover certificate and (or) authorization certificate.

**Subcontractor** means an entity engaged by the Contractor as per the Contractual terms to perform the Works. Subcontractors include any subcontractors, suppliers, other third parties up to the level of final contractor and their employees, including independent contractors, engaged by the Contractor to perform the Works.

**Darkness hours** means the period of time from the end of evening twilight to the beginning of morning twilight.

**Evacuation lighting** means a type of Emergency lighting for the evacuation of people.

* 1. The following abbreviations are used in the Regulations:

**HSE** means occupational safety, industrial safety, fire safety, and environmental

protection.

**CRD** means the company's regulatory document.

1. **General**
	1. Persons who have reached the age of eighteen are allowed to work in darkness hours.
	2. Employees who perform the works in darkness hours shall have qualification corresponding to the nature of the Works performed (the qualification level shall be confirmed by a document of professional education (training) and (or) qualification) and have passed the following before authorization for independent work:
* mandatory preliminary (pre-employment) and periodic (during employment) medical examinations;
* occupational safety training, induction and primary briefings on occupational safety and fire safety, on-the-job training and knowledge assessment for occupational safety requirements;
* training on the use (application) of personal protective equipment;
* training on rendering first aid to injured at the workplace.
	1. The works are planned in such a way as to minimize the time while the work is performed in darkness hours as much as possible.
	2. The requirements to the category of employees and the duration of working time at night (from 10:00 p.m. to 06:00 a.m.) are regulated by article 96, the Russian Labor Code.
1. **Conditions for the rest, meals and travel for employees.**
	1. The work regime in darkness hours, including night time, shall ensure, employees are given special breaks during the work hours conditioned by the work technology and methodology. The types of these Works, duration and the procedure for providing such breaks are established by the internal labor regulations of the Companies.
	2. Companies provide employees with meal breaks providing hot meals, for this purpose:
		1. If there are canteens, the opening hours of canteens shall be set, considering the meal time according to the work schedules;
		2. When providing meals by third-party companies, the break time shall be set considering the working hours of third-party catering companies.
	3. When performing the Works in darkness hours, including night time, the Companies shall consider social factors and carry out a number of activities:
* align the start and end of night shifts with schedules and routes of public land passenger transport in order to create maximum convenience for employees working at night;
* taking actions to limit or reduce the time duration by night employees to travel from the workplace to their place of residence, as well as exclude or reduce additional costs associated with their travel and increase their safety during night trips;
* arranging centralized transportation of employees engaged in work at night to the Workplace and back by the employer's transport.
1. **Requirements for arrangement of work in darkness hours**
	1. In order to safely carry out the Works in darkness hours the Contractor shall ensure and check whether the listed actions are implemented:
* providing safe workplace lighting using standard fixed and portable lighting equipment;
* drawing up, issue and registration of a permit-to-work to perform high-risk Works;
* lighting of construction sites and construction operation locations, workplaces, driveways and walkways to there during work in darkness hours;
* fencing and designation of wells, pits and other excavations, which shall be covered with lids, shields, with safety signs. lighting of fencing with electric warning lights;
* fencing of heated areas of soil, marking with safety signs and lighting;
* protective fencing, light alarm and safety signs of the concrete electric curing area;
* no Works if lighting is poor;
* providing employees with safety clothes with reflective elements, safety boots and other personal protective equipment appropriate for the type of work and climatic conditions.

6.2. Prior to start the Works affecting the activities of other companies at the Facility, the Contractor shall notify the Owner of the upcoming work at least five calendar days before it starts by sending a notification in any form to the Owner's industrial safety department, as well as the Contractor shall agree on a joint Work schedule and mandatory occupational safety actions with all the companies involved in these Works.

6.3. The employee shall inform the immediate work supervisor about the shortcomings and malfunctions identified before the start of the Work. It is allowed to start work after the preliminary actions have been taken and shortcomings and malfunctions have been eliminated.

1. **Requirements for lighting**
	1. Primary lighting shall be envisaged for all the construction sites and areas where the Works are carried out in darkness hours. It is generated by general lighting equipment (even or localized) and combined (general lighting is supplemented with the localized lighting).
	2. During the Works in darkness hours construction sites and construction operations areas, workplaces, roadways and access ways shall be properly lit up. Artificial lighting of construction sites and construction operations areas, including inside the buildings, shall meet the requirements of, including but not limited: Occupational Safety Rules for Operation of Electrical Installations approved by Russian Labor Ministry Order No. 903n dated 15.12.2020, Rules for Upkeep and Maintenance of Power Consumer Electrical Installations approved by Russian Energy Ministry Order No. 811 dated 12.08.2022, Fire Prevention Regime Rules in the Russian Federation approved by Russian Government Decree No. 1479. dated 16.09.2020.
	3. Standard fixed and portable lighting equipment shall be used for electric lighting of construction sites and areas. Masts for installation of lighting fixtures shall be equipped with lightning protection.
	4. Standard portable lighting plants shall be placed at the construction site in the Work areas and in the area of transport routes (in compliance with safety requirements).
	5. In darkness hours, regardless of the road lighting, the following lighting devices shall be turned on while driving:
* all motor vehicles – high-beam or low-beam headlights to be on;
* trailers and towed motor vehicles – parking lights to be on.
	1. The high beam on the vehicle shall be switched to the low beam:
* when passing one another at a distance of at least 150 m to the vehicle, as well as at a greater distance, if the oncoming vehicle driver will show the need for this by periodical switching the headlights;
* in any other cases, to exclude the possibility to have drivers of both oncoming and passing vehicles dazzled.
	1. If dazzled, the driver shall turn on the emergency alarm and slow down and stop without changing the line.
	2. Primary lighting shall be envisaged for all the construction sites and areas where the Works are carried out in darkness hours. It is produced by general lighting devices (even or localized) and combined (general lighting is supplemented with the localized lighting).
	3. General even lighting shall be used if the rated illuminance value does not exceed 10 lux. In all other cases, and in addition to the general even lighting, general localized lighting or local lighting shall be provided.
	4. It is prohibited to use open fire sources (bonfires, torches, blowtorches, etc.) for lighting while carrying out the Works in darkness hours. General localized lighting fixtures shall be installed on buildings, structures and masts of general even lighting. Installation of lighting devices on building roofs covered with combustible roofing materials is prohibited.
	5. When carrying out the Works on construction sites, it is required to follow the requirements for lighting the work area established by the regulatory technical documentation (if changed, it is required to use the current version), for instance, the illuminance created by general lighting devices on construction sites and Work areas inside building, shall not be lower than the standard one given in Table 1, regardless of the light sources used.

**Table 1. Regulatory requirements for lighting**

| **Sections of construction sites and work areas** | **The plane (H – horizontal, V – vertical, I – inclined), which the illuminance is standardized for, the height of the plane above the ground or floor, m** | **Average illuminance, lux** |
| --- | --- | --- |
| Motor roads at the construction site | H –0.0 (roadway)  | 10 |
| Railway tracks at the construction site | H –0.0 (rail head surface) | 5 |
| Approaches to bridges and railway crossings | H –0.0 (rail head surface) | 10 |
| Road works: |  |  |
| * installation of basements for road pavement;
 | H –0.0 (at ground level) | 20 |
| * road surfacing; installation of railway tracks and crane runways
 | H –0.0 (at ground level) | 30 |
| Loading, installation, lifting, unloading of equipment, building structures, parts and materials by lifting cranes | H (handling area for equipment, structures, parts and materials) | 50 |
| V –0.0 (crane hook in all its positions on the driver's side) | 20 |
| Non-mechanized handling of structures, parts, materials and tilting | H (handling area) | 20 |
| Assembly and installation of construction and lifting mechanisms: |  |  |
| * assembly with fitting of parts (shafts, liners, bearings), different types of adjustment, change of parts, etc.;
 | H (over the entire height of the assembly) | 50 |
| * installation of actuating moving parts (chains, cables, blocks).
 | H (over the entire height of the assembly) | 30 |
| H (at all levels where installation is carried out) | 30 |
| Work inside process equipment, vessels, tanks, bunkers, column-type equipment, etc. | V (at all levels where installation is carried out) | 30 |
| Process equipment testing |  |  |
| * indoors;
 | H (workplaces) | 200 |
| * outside buildings
 | H (workplaces) | 100 |
| Excavation activities carried out by dry method with earthmoving and other mechanisms, except for trenching and leveling | V (along the entire face height and the entire dump height on the driver's side) | 10 |
| Trenching for foundations, utilities | H (at the trench bottom level) | 20 |
| V (along the entire trench height) | 10 |
| Soil excavation by bulldozers, scrapers, rollers and other mechanisms | H (areas being worked) | 20 |
| Drilling activities, pile driving | V (along the entire measured depth or pile) | 10 |
| Installation of steel, reinforced concrete and wooden structures (building frames, bridges, racks, girders, beams, etc.) | V (along the entire height of the assembly) | 30 |
| Handling and laydown areas for prepared rebars during concrete and reinforced concrete works | H –0.0 (at ground level) | 5 |
| V (along the entire height of the stored rebars) | 5 |
| Stationary welding machines, shearing machine, bending machines for rebars cutting and bending: |  |  |
| * indoors;
 | H (on the work surface) | 200 |
| * outside buildings
 | H (on the work surface) | 100 |
| Rebar assembly (splicing, welding, tying of frames, etc.) | H (on the ground or work surface) | 30 |
| V (along the entire height of the work area) | 30 |
| Installation of formwork, scaffolding and fencing | H (at all levels of formwork, scaffolding and fencing) | 30 |
| V (at all levels of formwork, scaffolding and fencing) | 30 |
| Concreting: |  |  |
| * columns, beams, paving slabs, bridge structures, etc.;
 | H (on the concrete surface) | 30 |
| * concreting of large areas (concreting of slopes of earthen dams, etc.)
 | I (on the concrete surface) | 10 |
| Concrete transporting belt conveyors  | H (on the conveyor surface) | 10 |
|  | I (on the conveyor surface) | 10 |
| Concrete transport racks | H (on the crane tracks) | 5 |
| Rubble concrete masonry | H (at the masonry level) | 10 |
| V (in plane of the wall) | 5 |
| Masonry made of large concrete blocks, natural stones, brickwork, installation of prefabricated foundations | H (at the masonry level) | 10 |
| V (in plane of the wall) | 10 |
| Approaches to workplaces (stairs, scaffolding, platforms) | H (on formworks, platforms and approaches) | 5 |
| Assembly and fitting of finished joinery products (window frames, door panels) | H – 0.8 (working surface) | 50 |
| V (along the entire height where works are performed) | 50 |
| Floor construction in the premises: |  |  |
| * installation of earthen, clay-concrete, sand, crushed stone, gravel, concrete and asphalt concrete floors, underlying layers and coatings;
 | H – 0.0 (on the floor in the work area) | 200 |
| * installation of tile floors, parquet flooring and linoleum.
 | H – 0.0 (on the floor in the work area) | 300 |
| Roofing works | H (in the roof plane) | 50 |
| Waterproofing and thermal insulation works: |  |  |
| * on construction sites of enterprises of various industries;
 | H (on the work surface) | 30 |
| * individual parts, structures (pipelines, etc.).
 | H (at the work surface level) | 50 |
| Plastering works: |  |  |
| * indoors;
 | V (at all levels of the work surface) | 200 |
| * outside buildings
 | V (at all levels of the work surface) | 100 |
| Facing works in premises (with ceramic plates and panels and other finishing materials), wallpapering | V (at all levels of the work surface) | 200 |
| Painting works, paste filler, primer, painting, pattern painting with rollers, etc.: |  |  |
| * indoors;
 | V (at all levels of the work surface) | 200 |
| * outside buildings.
 | V (at all levels of the work surface) | 100 |
| Glass works | V (at all levels of the work surface) | 100 |
| Installation of pipelines and distribution of networks to appliances and equipment, installation of sanitary equipment (bathtubs, sinks, etc.), installation of fans, air conditioners, installation of ventilation ducts | H (at all levels of the work surface) | 100 |
| Installation of instrumentation and controls | H (on control devices) | 200 |
| Assembly (manufacture) of sanitary equipment and compartments for water supply, sewage, heating, gas pipeline and hot water supply systems | H (on the work surface) | 200 |
| Preparation for installation (marking, punching of passages) and installation of electrical wiring | H (at all levels where works are performed) | 100 |
| Termination of low-voltage and high-voltage cables, installation of funnels and couplings, installation of high-voltage equipment and secondary wiring: |  | 200 |
| * indoors;
 | H (at all levels where works are performed) | 200 |
| * outside buildings.
 | H (at all levels where works are performed) | 100 |
| Installation of electrical appliances, lighting fixtures, etc.: |  |  |
| * indoors;
 | H (at all levels where works are performed) | 200 |
| * outside buildings.
 | H (at all levels where works are performed) | 100 |
| Installation and assembly of process equipment (machine-tool equipment, conveyors, overhead cranes, etc.). | H (at all levels where works are carried out) | 200 |
| Installation and assembly of bulky equipment (rolling mills, roller conveyors, crushing units, tanks, chemical production containers, boilers, etc.) | H (at all levels where works are carried out) | 100 |
| Installation and assembly of power equipment (steam turbines, high-voltage equipment, automatic telephone exchanges, hydro turbines, generators, electrical equipment). | H (at all levels where works are carried out) | 200 |
| Open warehouses: |  |  |
| * non-metallic materials;
 | H –0.0 (at ground level) | 10 |
| * steel structures and equipment.
 | H –0.0 (at ground level) | 10 |
| Storage premises for bulk materials (cement, alabaster) and bulky items. | H –0.0 (at floor level) | 10 |
| Storage premises for small process equipment and installation materials. | H –0.0 (at floor level) | 20 |

* 1. Fire hydrants and reservoirs located on the construction site territory shall be indicated by signs with a reflective surface or light signs turned on at night or constantly, with clearly marked figures of the distance to their location.
	2. Evacuation lighting shall be envisaged for the evacuation of people from the premises in case of the Primary lighting emergency outage. Evacuation lighting shall be installed along the main evacuation routes, as well as in the passages where there is a risk of injury.
	3. Evacuation lighting (in premises or in work areas outside buildings) shall be envisaged:
* in places dangerous for employees to pass;
* in passageways and staircases used for the evacuation of employees, if the number of evacuees exceeding 50;
* along the main passages of process premises with more than 50 employees;
* in process premises with employees constantly working therein, where leaving the premises in case of the Primary lighting emergency outage is associated with the risk of injury due to the continued operation of production equipment;
* in process premises without natural light.
	1. Evacuation lighting shall provide illuminance on the floor along the central line of the passage at least 1 lux inside the building under construction, while a strip with a width of at least 50% of the passage width, symmetrically located relative to the central line, shall have illuminance of at least 0.5 lux.
	2. Lighting of evacuation routes from construction and installation work areas inside buildings shall be provided along evacuation routes:
* in the corridors and passages along the evacuation route;
* in places of change (difference) of the floor level or covering;
* at each route direction change;
* at the intersection of passages and corridors;
* on staircases, while each step shall be illuminated;
* before each medical station;
* in places where emergency communication facilities and other means intended for emergency warning are located;
* where primary fire extinguishing equipment is located;
* where the evacuation plan is located.
	1. Security lighting shall be envisaged in cases when protection of a construction site or construction operations area is required during darkness hours. For providing security lighting a number of the Primary lighting fixtures shall be allocated. Security lighting shall provide at the boundaries of construction sites or Work areas horizontal illuminance of at least 0.5 lux at ground level or at a level of 0.5 m from the ground on one side of the vertical plane perpendicular to the boundary line.
	2. Standby lighting shall be envisaged in critical structures concreting Work areas in cases where, according to the process requirements, a break in concrete pouring is not allowed. Standby lighting in reinforced structures concreting areas shall provide illuminance of at least 10 lux, and at large area concreting sites – at least 5 lux at the level of the concrete mix being laid.
1. **Responsibility**
	1. Employees of companies involved in works are liable in accordance with the requirements of the current Russian legislation for failure to comply with or improper fulfillment of the Regulations requirements.
1. Terms and definitions are set forth in section 3. [↑](#footnote-ref-1)