



APPENDIX No.

to Order of \_\_\_\_\_ 2022  
No. \_\_\_\_\_

# **STANDARD ON WORK IN RESTRICTED ACCESS AND CONFINED SPACES IN JSC ILIM GROUP**

## **Second revision**

**It's About LIFE program element  
Hazardous Substances and Agents  
of Ilim Group's Production System (GMS)**

St. Petersburg  
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## 1. AREA OF APPLICATION

- 1.1 Work in Restricted Access and Confined Spaces Standard of JSC Ilim Group has been developed to be applied at the sites and facilities of Ilim's locations to take efficient actions in order to ensure safety of Ilim Group employees as well as employees of its subsidiaries and contractor companies when working in restricted access and confined spaces. This Standard also aims to prevent incidents with employees executing this work.
- 1.2 The Standard sets out the requirements for working in RACS.
- 1.3 The Standard comprises general requirements which shall be applied along with other requirements of current regulatory and technical documentation.
- 1.4 The requirements of the Standard shall apply to all employees of Branches as well as to contractors' employees, who perform work in RACS or preparatory actions required for such works.
- 1.5 The Standard is recommended for use by the subsidiaries and affiliates of the Company. Application of this Standard in subsidiaries and affiliates is achieved through approval and implementation of respective internal regulations by duly authorized management bodies of such subsidiaries and affiliates.

## 2. DEFINITIONS AND ABBREVIATIONS

**Standard** - Work in Restricted Access and Confined Spaces Standard of JSC Ilim Group.

**Company** - JSC Ilim Group

**RACS** - restricted access and confined spaces.

**MS in RACS** - method statement in RACS.

**Work in RACS** includes any work which meets all of the following requirements:

1. It is performed in spatially confined (restricted) facility that is not designed for the permanent presence of employees in it;
2. The size of the facility shall be large enough to fully accommodate an employee or employees to carry out work there;
3. The entrance(s) and/or exit(s) of the facility make it difficult for employees to move quickly through the facility;
4. Air exchange may not be sufficient to sustain breathing.

**List of the RACS standard equipment:** storage vessels, power boilers, digesters, recovery boilers, evaporators, lime kilns, drying cylinders, cisterns, wells, sewage headers, air ducts, etc.

**Work in RACS fall into the following categories:**

1. **Work in RACS with gas hazardous environment (category 1):** work during which there is a possibility or high possibility of emission of hazardous vapors, gases or other substances which can cause harmful impact on a human body. **Is included in gas hazardous work and executed in accordance with local gas hazardous work regulations.**
2. **Work in RACS with non gas hazardous environment, but with insufficient oxygen concentration (lower than 17%) (category 2):** work during which there is absolutely no emissions of hazardous vapors, gases or other substances which can cause harmful impact on the human body. **Is included in gas hazardous work and executed in accordance with local gas hazardous work regulations.**
3. **Work in RACS with explosion and fire hazardous environment (category 3):** work during which there is a possibility or high possibility of emissions of hazardous vapors, gases or other substances which can cause an explosion, a fire, and also work with the oxygen content higher than 23% of the volume fraction. **Is included in gas hazardous work and executed in accordance with local gas hazardous**

**work regulations.**

4. **Work in RACS with a non-explosive and fire hazardous environment (category 4):** work during which there is no possibility of emissions of hazardous vapors, gases or other substances which can cause an explosion, a fire, at the oxygen content of 17- 23% of the volume fraction. **Is not included in gas hazardous work and is performed with formalization of work permit for hazardous work.**

**Continuous gas analyzer** - gas analyzer switched on for a long time; its sensor can work in a continuous or intermittent manner.

**Alarm device** - a device which has a safety alarm but is not equipped with a display or another controlling device.

**Stationary gas analyzer** - gas analyzer, all components of which are installed at the place of use for permanent operation.

**Portable gas analyzer** - an independently powered, batch or continuous gas analyzer designed to be easily moved from place to place and used while moving.

### **3. RISK ASSESSMENT**

- 3.1 Assessment of risks relative to the manufacturing process and workplaces that are related to work in restricted access and confined spaces shall be performed in accordance with the internal regulations of the Company. Risks shall be eliminated before the beginning of work in accordance with clause 3.5 and/or mitigated to a controlled level.
- 3.2 Based on risk assessment results, dangerous areas and equipment shall be identified and an action plan shall be developed aimed to mitigate/eliminate risks of staff injuries and death while working in RACS. Technical risk mitigation actions shall be included in Hazardous Substances and Agents element of It's About LIFE program.
- 3.3 Messages with the relevant indicator shall be created in SAP PM for all technical actions included in It's about LIFE program and funded from the Maintenance Department budget. Such messages shall be created by December 31 of the year preceding the year when the relevant action is implemented or earlier in case any additional instructions or orders are issued.
- 3.4 Actions to eliminate risks of staff death while working in RACS which require investments shall be included in CAPEX 5-year plans as Category A risks.
- 3.5 Actions to eliminate and/or mitigate professional risk levels of working in RACS include, in the descending order of priority (prior to proceeding to the next method, it is required to assess the feasibility of implementing the previous one):
  - 1) eliminate hazardous work in RACS or reduce of completion time;
  - 2) replace hazardous work with a less hazardous (with lower risk level) activity;
  - 3) implement technical and (or) technological methods to mitigate risks of harmful impact on employees;
  - 4) implement administrative methods of limiting time harmful exposure of employees;
  - 5) duplicate measuring devices for work environment parameters or indicators (alarm devices);
  - 6) duplicate communication devices;
  - 7) use collective protective equipment;
  - 8) use personal protective equipment.

## **4. REQUIREMENTS FOR EMPLOYEES**

- 4.1 People who have attained to the age of eighteen years, have attended a medical check-up with no restrictions for working in RACS revealed and have been trained in safe working methods and techniques shall be permitted to work in RACS.
- 4.2 Employees who are permitted to work in RACS are divided into 3 categories based on the safety of work in RACS (hereinafter, groups).
- 4.3 Group 1 includes employees who are authorized to directly work in RACS as part of a team.
- 4.4 Group 2 includes the following employees:
  - 1) responsible foremen in RACS;
  - 2) supervisors;
  - 3) employees who are to assess RACS utilities parameters, including gas accumulation;
  - 4) employees in charge of evacuation and rescue who also have qualifications to evacuate and rescue (hereinafter, employees responsible for rescue);
  - 5) employees who can inspect the work site, perform preparatory actions for work, and determine risks prior to work;
  - 6) employees who ensure safe work in RACS in the work process.
- 4.5 Group 3 includes the following employees:
  - 1) employees who are appointed as responsible for organization and safe execution of work in RACS in Branches;
  - 2) officials who issue the work permit;
  - 3) supervisors responsible for the work;
  - 4) members of the examination boards who test knowledge, competencies and skills in safe methods and techniques when working in RACS.
- 4.6 Employees shall be trained in safe methods and techniques when working in RACS if:
  - they are admitted to work in RACS for the first time;
  - they are transferred from another work and have not received the said training before;
  - they have not worked in RACS for more than one year;
  - periodically, after the expiry of the previous qualification.
- 4.7 Refresher training in safe methods and techniques when working in RACS for Group 1 and Group 2 employees shall be conducted at least once every 3 years.
- 4.8 Refresher training for employees authorized to assess RACS parameters and rescue shall be conducted annually.
- 4.9 Refresher training for Group 3 employees shall be conducted at least once every 5 years.
- 4.10 Assessment of knowledge, practical skills and competencies in safe methods and techniques when working in RACS shall be conducted at least once a year.
- 4.11 Training in safe methods and techniques when working in RACS includes:
  - training for the Groups 1, 2 or 3;
  - training in the use of gas analyzers, alarm devices, walkie-talkie radios, collective and personal protective equipment;
  - assessment of knowledge (theoretical examination and execution of practical (occasional) tasks);
  - internship during at least two working days (shifts), including practical training in emergency situations;
  - mandatory training and knowledge assessment in the scope of this standard;
  - briefing before the start of work.

- 4.12 Supervisors and employees responsible for rescue shall be trained in first aid inside RACS.
- 4.13 Employees permitted to work in RACS and gas rescue workers shall:
- 1) know the risks that are present when working in RACS;
  - 2) know the MS in RACS;
  - 3) know the action plan in case of emergency and during rescue, evacuation and rescue from RACS;
  - 4) know how to self-rescue;
  - 5) be able to use collective and personal protective equipment;
  - 6) be able to use communication equipment between the team members and the supervisor;
  - 7) be able to use gas analyzers/alarm devices.

## **5. GENERAL PROVISIONS**

- 5.1 The requirements of this Standard, Russian occupational safety legislation and operations documentation for RACS facilities and process equipment manufacturer shall be taken into account when developing occupational safety instructions for the employees carrying out work in RACS.
- 5.2 Each structural unit shall develop and approve a list of RACS facilities in accordance with Appendix No. 3. The list shall be reviewed at least once a year, as well as when changing the process and process flow diagram or commissioning new equipment and facilities.
- 5.3 The list of RACS is developed by the head of production area/plant manager. The list of RACS is approved by the relevant director of the Branch (project manager). The list is coordinated by the Fire Safety and Emergency Response Office and the EHS Department of the Branch.
- 5.4 The original lists of RACS shall be retained by the structural units, and copies shall be sent to the Fire Safety and Emergency Response Office and the EHS Department of the Branch.
- 5.5 Entrance to RACS facilities shall be marked in accordance with the Visual Aids Management and Procedure for Use of Safety Signs Standard.
- 5.6 Organizational and technical and technological actions shall be taken prior to starting work in RACS.
- 5.7 Organizational actions include:
- appointment of employees responsible for the organization and safe execution of work in RACS. The order may be combined with the order on the appointment of employees responsible for the organization and safe execution of hazardous work, subject to training in accordance with Section 4 of the Standard;
  - Contractors' representatives shall provide the heads of structural units with orders for the appointment of responsible managers and contractors to execute work in RACS;
  - the appointment of employees responsible for the maintenance and regular inspection of collective and personal protective equipment;
  - compulsory execution of a work permit. All works in RACS shall be carried out with a formalization of the work permit. For the organization of safe work in RACS, the work permit shall be issued for the following employees:
    - supervisor responsible for work;
    - permitting supervisor;
    - responsible contractor;
    - team members;
    - observer;

- employees responsible for rescue. Employees can be team members who shall stay out of RACS.
  - MS development in RACS or respective process flow chart development and approval;
  - drafting an action plan in case of emergency and in case of rescue works, evacuation and rescue from RACS with the description of methods and means of rescue.
- 5.8 Technical and technological measures include:
- hazard identification and risk assessment before the start of work and their elimination and/or mitigation in accordance with clause 3.5;
  - RACS emptying, cleaning, washing, steaming and purging from hazardous substances before staff enter RACS;
  - equipment and device locking in RACS using ZES procedures;
  - laboratory analysis of the environment parameters before starting work in RACS and continuous monitoring while working in RACS;
  - fencing of the work place, displaying of the warning and instructive posters (signs);
  - use of collective and personal protective equipment;
  - use of RACS equipment to ventilate RACS;
  - control of measuring device (alarm) serviceability;
  - control of communication device serviceability;
  - choice of electric tools and lighting devices in accordance with Ilim Group's Policy on Electrical Equipment Use;
  - choice of hand-held tools depending on the working conditions.

## **6. REQUIREMENTS FOR GAS ANALYZERS AND ALARM DEVICES**

- 6.1 Gas analyzers and alarm devices for determining oxygen, hazardous vapors, gases and other substances that may be present in the work area shall be available in the structural unit of the Branch to carry out work in RACS.
- 6.2 The gas analyzer and alarm device designed to be used in the presence of corrosive gases and vapors shall be made of materials resistant to their effects and corrosion.
- 6.3 The gas analyzer and alarm device shall be used in accordance with the manufacturer's documentation.
- 6.4 The gas analyzer and alarm device shall be marked with a verification mark. It is prohibited to use instruments without verification.
- 6.5 The chief instrumentation engineer or another official appointed by the order of the Branch shall ensure:
- maintenance of a list of stationary and portable gas analyzers and alarm devices;
  - monitoring of the calibration dates of gas analyzers and alarm devices and organization of timely verification;
  - organization of the purchase of gas analyzers, alarm devices at the request of the heads of departments, coordinated with the ESH Department, Fire Safety and Emergency Response Office;
  - inclusion of costs for the purchase, repair and calibration of gas analyzers and alarm devices based on requests from structural units in the budget.
- 6.6 Managers of structural units operating RACS shall:
- determine the need for gas analyzers, alarm devices and submit timely requests for their purchase;
  - ensure proper operation of gas analyzers and alarm devices;
  - supervise the training of their direct reports in the use of gas analyzers and alarm devices.

## **7. SAFETY REQUIREMENTS BEFORE STARTING WORK**

- 7.1 Before starting work, the permitting supervisor shall:
- determine safe methods and techniques of work execution;
  - identify possible harmful substances in the work area;
  - review MS in RACS and the action plan in case of an emergency and rescue work, evacuation and rescue from RACS;
  - ensure that devices for the rescue of employees are available, accessible and in good operating condition;
  - determine personal, collective and respiratory protective equipment;
  - determine routes of entrance and exit;
  - arrange for tripping and locking of hazardous energy sources;
  - arrange for the cooling of RACS to a safe temperature;
  - issue a work permit;
  - determine the necessity and the number of supervisors and employees responsible for rescue;
  - arrange for removal of medium from RACS;
  - arrange for purging and washing of the work area;
  - arrange for laboratory analysis of the work area air.
- 7.2 Before starting work, the supervisor responsible for work shall:
- obtain a work permit;
  - verify compliance with the safety measures in accordance with the work permit;
  - conduct a safety briefing for employees on safety measures at work and rescue methods in case of an emergency;
  - verify that the employees have certificates permitting them to work in RACS;
  - develop MS in RACS or a process flow chart and communicate it to the team;
  - review the action plan in case of an emergency and during rescue works, evacuation and rescue from RACS and communicate it to the team;
  - ensure the use of work clothing, personal protective equipment, tools and appliances, appropriate for the nature of work and ensuring the safe process;
  - ensure fencing of hazardous area;
  - ensure installation of safety signs;
  - connect ventilation and ensure air exchange in the work area;
  - ensure continuous air control in the work area;
  - ensure communication between team members;
  - provide the team with power tools and lighting in accordance with Ilim Group's Policy on Electrical Equipment Use Standard;
  - provide the team with manual tools based on working conditions.
- 7.3 The permitting supervisor shall check:
- implementation of safety measures while preparing the facility for work;
  - availability and readiness of collective and personal protective equipment of team members;
  - absence of external hazardous factors which affect the safety at the work site.
- 7.4 A special system of warning signs at the entrance shall be used to control entry into RACS. Warning signs shall be located in front of entrances to/exits from RACS and shall either contain information about an absolute ban on entry or specify conditions for entrance/exit.
- 7.5 If RACS needs to be ventilated before starting work, instead of removing the hatch, it is necessary to ensure the installation of a grid and a fence



## 8. SAFETY REQUIREMENTS WHILE WORKING

- 8.1 Depending on the type of work in RACS it is necessary to fulfill minimum requirements in accordance with Appendix No. 2.
- 8.2 Employees working in RACS shall constantly monitor the air quality in the work area by using personal or collective gas analyzers/alarms. The team working in RACS shall have no less than two gas analyzers/alarms, one of which shall be held by the observer.
- 8.3 While conducting measurements and entering RACS where harmful substances may be present and oxygen deficiency may occur, a self-contained breathing apparatus with air supply shall be used.
- 8.4 Employees conducting inspection or working from the ground at an open well that is not protected by a safety fence shall use the rescue system for fall protection.
- 8.5 When working inside RACS which requires descending to enter and ascending to exit, it is necessary to use the rescue system consisting of an anchor device, safety harness and shock-absorbing coupling, to ensure safety during work at heights.
- 8.6 It is forbidden to use the rescue system without an anchor device (the observer or standby attendant shall not hold the end of the fall arrest in the hands or hold a lanyard from the safety harness of the employee working inside the container structure).
- 8.7 Visual contact must be established for communication between the observer and the employees inside RACS or if it is not possible, then communication shall be established by using a radio and/or a bell (safety) rope. Close to the entrance to RACS, the anchor lines must be provided for attaching bell (safety) rope. Rope anchorage point shall be marked.
- 8.8 For monitoring employees' actions, the observer shall always be in the area which is specified in the work permit in RACS. His/her functions include:
- RACS environment assessment and parameter control;
  - informing the employees about changes in RACS environment parameter control;
  - informing the employees responsible for rescue.
- If the observer needs to leave the work area, the team shall be escorted out from RACS.
- 8.9 While completing certain work in RACS it is necessary to follow the requirements of the work/rest schedule which is outlined in Table 1.

Table 1

Labor routine	Work time	Break duration
Work performed in RACS using a hose gas mask	no more than 30 minutes	at least 15 minutes with exiting from RACS
While performing work inside RACS with the air temperature of 40 - 50 °C	no more than 20 minutes	at least 20 minutes with exiting from RACS
Work in the manhole	no more than 15 minutes	at least 5 minutes with exiting from RACS

- 8.10 When performing welding work in RACS, welding transformers, welding inverters, acetylene generators, cylinders with liquefied or compressed gas are placed outside the RACS where gas flame work is carried out.

## 9. SAFETY REQUIREMENTS UPON COMPLETION OF WORK

- 9.1 After completing work in RACS, it is necessary to:
- remove the tool, appliances and protection equipment from the workplace;

- the responsible works supervisor shall personally check that there are no employees, equipment or tools in RACS;
  - close all RACS where the work took place;
  - remove the hazardous area safety fence and safety signs;
  - the responsible works supervisor shall close the work permit.
- 9.2 When there is a break in work due to the end of the work shift, the team shall be removed from the workplace (from RACS).
- 9.3 Entrances shall be closed off if there are no employees in RACS.

## **10. ACTIONS IN EMERGENCIES**

- 10.1 If there is a danger to life and health inside RACS, every employee inside RACS shall leave this area. After that and before re-entering, it is necessary to reassess the risks to avoid recurrence of this situation.
- 10.2 The observer or another employee shall immediately raise the alarm, stop work, and evacuate employees from RACS if the following occurs:
- changes in employee behavior;
  - dangerous situation in RACS;
  - dangerous situation which develops outside RACS.
- 10.3 When it is impossible to evacuate on your own, you shall call the emergency dispatcher and Emergency Prevention SPASS service. Also, if there are non-professional gas rescuers in the unit, you shall call them.
- 10.4 In case of an emergency situation in RACS it is forbidden to enter RACS in order to rescue an employee who is in RACS.
- 10.5 After that, the observer shall immediately report what has happened to the manager in charge and the supervisor in charge.

## **11. RESPONSIBILITY AND CONTROL**

- 11.1 Mill/Forest Managers shall be responsible for:
- compliance with the requirements of this Standard at Ilim Group's locations;
  - procurement of resources required for Standard implementation.
- 11.2 The heads of the Company's structural units and project managers shall be responsible for:
- communication of the Standard to the employees and other persons permitted to access the Company's facilities;
  - ensuring compliance with the requirements of the Standard in their structural units;
  - up-to-date RACS lists and organizational documents.
- 11.3 At least once a year, the heads of the OHS Departments of the Branches shall conduct self-audits to check compliance with the requirements of this Standard in the structural units using the checklist in Appendix 1 subject to the identification of areas of concern and drafting of improvement plans.
- 11.4 Control over compliance with the requirements of the Standard shall be exercised by EHS Directors and by the heads of the Fire Safety and Emergency Response Offices of the Company's Branches.
- 11.5 Persons involved in the violation of the requirements set forth in this Standard shall be liable in accordance with applicable laws of the Russian Federation.

## **12. LIST OF REGULATORY DOCUMENTS USED FOR THE DEVELOPMENT OF THIS STANDARD**

- 12.1 Health and Safety Regulations for work in restricted and confined space, approved by Order of the Ministry of Labor and Social Protection of the Russian Federation No. 902n of December 15, 2020.

Checklist of standard on work in restricted access and confined spaces in JSC Ilim Group		Document No.:		
<p>The requirements of the Standard that shall be implemented and continuously followed by all structural units, subsidiaries and contractors are listed below.</p> <p>Use the following dropdown list assigning a score (1 to 5 points) to each item of the list.                      1: unsatisfactory situation, 2 - low level of compliance/implementation, 3 - satisfactory level of compliance/implementation, 4 - good level of compliance/implementation, 5 - excellent level of compliance/implementation. If an item was assigned 1 or 2 points, it is required to fill in the Remarks/Actions box.</p> <p>Evaluation shall be conducted by a team of competent employees who have complete and comprehensive information at their disposal and who can professionally and impartially assess the situation, as well as to guarantee continuous compliance with the Standard requirements.</p> <p>Scoring criteria:                      1 - total non-compliance with the requirements that needs immediate corrective actions.                      2 - partial non-compliance with the requirements that needs significant improvement.                      3 - compliance with the requirements that needs insignificant improvements.                      4 - full compliance with the requirements                      5 - full compliance with the requirements, such case that can be used as a benchmark to be implemented in other divisions and Branches of JSC Ilim Group.</p>				
Branch/department/project:			Filled by (Name):	
Basis for assessment:			date:	
No.	The Policy requirements that shall be implemented/applicable criteria	Assessment: (Dropdown list)	Remarks /actions	
1	risk assessment was carried out for manufacturing process and workplaces associated with work in RACS. LIFE program includes all technical actions from risk assessment			
2	Action plan for implementation of the Standard was developed			
3	employees involved in the preparation and performance of work in RACS are trained in safe methods and techniques of work in restricted and confined spaces in accordance with the clauses. 4.11 and 4.12			
4	manuals on labor protection for employees performing work in RACS were developed			
5	RACS list was developed and approved			
6	all entrances to RACS are marked and closed			
7	persons responsible for arrangement and safe performance of work in RACS were appointed			
8	contractors provide local regulations for work in RACS			
9	an official appointed by the branch-wide order maintains a list, registers, purchase and costing of gas analyzers and alarms			
10	work in RACS is carried out if MS in RACS or process chart for work performance is available			
11	work in RACS is carried out if the action plan in an emergency situation is available and during rescue operations, evacuation and rescue from RACS			
12	laboratory analysis of the environment parameters is carried out before the start of work in RACS			
13	monitoring of the work area air by individual or collective gas analyzers/alarms is carried out continuously when working in RACS. Team working in RACS shall have no less than two gas analyzers/alarms			

14	warning and mandatory posters, signs to control entry into RACS are used		
15	equipment to ventilate RACS is used		
16	for work inside RACS which require descending to enter and ascending to exit, there are safety systems to ensure the safety of work at heights		
17	evacuation and rescue means are equipped and available for all RACS		
18	a contact has been established for communication between the observer and employees within RACS		
19	when performing welding work in RACS the welding transformers, welding inverters, acetylene generators, cylinders with liquefied or compressed gas are placed outside RACS		
	<b>General Assessment:</b>		<b>Number of points and less: 2</b>
<b>General Assessment criteria</b>			
<b>The Standard has been fully implemented and is maintained at the appropriate level:</b>			( $\geq 76$ and/or a maximum of two items got 1 and 2 points)
<b>In order to implement the Standard it is required to develop an action plan:</b>			(from 57-79 and/or a maximum of two items got 1 and 2 points)
<b>The Standard has not been implemented, <u>urgent action</u> is required:</b>			(< =56 and/or two or more items got 1 and 2 points)
<b>General comments/confirmation of the assessment results</b>			
<b>I hereby confirm the performance of the assessment and the accuracy and reliability of the data.</b>			
<b>Full name/position:</b>		<b>Signature/date:</b>	
<b>Full name/position:</b>		<b>Signature/date:</b>	
<b>Full name/position:</b>		<b>Signature/date:</b>	
<b>Approved by (name/position)</b>		<b>Signature/date:</b>	

**APPENDIX 2**

<b>Guidelines</b> Type of work	<b>PPE</b>	<b>Respiratory PPE</b>	<b>Gas analysis</b>	<b>Ventilation</b>	<b>Lighning</b>	<b>Electrical equipment and tools</b>	<b>Safety signs</b>
<b>Works in restricted and confined space with gas-hazardous environment (Category 1)</b>	When the air temperature in RACS is above 50 °C, while working in RACS a protective suit and personal protective equipment that provides effective heat protection shall be used	1) Insulating suit and/or gas mask  2) In the conditions of possible limited exposure of employees (within acceptance limits) to harmful vapors, gases and other substances independent of their actions, which may become dangerous only if the requirements for continuous monitoring of the work area environment parameters are not met (including failure of alarm systems), a self-contained breathing apparatus with an external air supply for breathing, shall be used as the main means of protection.  3) In RACS with a low risk gas hazardous environment, self-contained insulating personal protective equipment or a self-contained breathing apparatus with an external air supply for breathing shall be used.	Laboratory analysis of environment parameters before starting work in RACS  Continuous monitoring of work area air quality by using means of individual and collective gas analysis	The need for additional natural or forced ventilation in RACS is accepted by the person issuing work permit and responsible work manager based on the results of air composition assessment in RACS.  Forced ventilation shall also be provided when the air temperature in RACS is above 30°C.	In accordance with Ilim Group's Policy On Electrical Equipment Use	In accordance with Ilim Group's Policy On Electrical Equipment Use	The restricted hazardous area shall be fenced and signs shall be placed: "Caution! Dangerous area".  The place where the safety watcher(s) shall be safely located shall be marked with the "Safety watcher" sign  Warning signs at the entrance  Warning fences
<b>Work in RACS with a non-hazardous environment but with insufficient oxygen concentration (less than 17%) (Category 2)</b>		Isolating self-rescuer with sufficient time of action for evacuation and rescue from RACS	Laboratory analysis of environment parameters before starting work in RACS  1. Continuous monitoring of the air environment in the work area using means of individual gas analysis equipment  2. Stationary and (or) mobile gas control systems shall be used to control areas adjacent to the RACS work area.				
<b>Work in RACS with an explosive and flammable</b>	When the air temperature in RACS is above 50 °C when working in RACS,	Protective suits and (or) breathing apparatus	Laboratory analysis of environment parameters before			In accordance with Ilim Group's Policy	

<p><b>environment (Category 3)</b></p>	<p>protective suit and personal protective equipment that provide effective heat protection shall be used</p> <p>Antistatic work clothes and special shoes made of spark-proof materials shall be used. It is forbidden to work in RACS with an explosive and flammable environment in dirty, oily work clothes, as well as in clothes made of synthetic fibers.</p>		<p>starting work in RACS</p> <p>continuous monitoring of work area air quality by individual and/or collective means of pre-explosive concentration gas analysis</p>		<p>On Electrical Equipment Use</p> <p>Explosion-free electrical equipment</p> <p>Spark-proof tools and appliances (made of non-ferrous metals)</p>	
<p><b>Works in RACS with an explosive and flammable proof environment (Category 4)</b></p>	<p>When the air temperature in RACS is above 50°C while working in RACS, protective suit and personal protective equipment that provides effective heat protection shall be used</p>		<p>Laboratory analysis of environment parameters before starting work in RACS</p> <p>Continuous monitoring of the working area air quality</p>		<p>In accordance with Ilim Group's Policy On Electrical Equipment Use</p>	

List of facilities related to RACS

(name of the structural unit)

No.	Restricted and confined space, Category 4 (name, equipment position according to the diagram)	Potential hazardous and harmful industrial factors	Key actions	
			Before starting work in RACS	While working